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# BRITISH TECHNOLOGY INDEX

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## INTRODUCTION

This Index is a subject guide to the major articles published in 400 British technical journals in 1964. It comprises about 30,000 entries arranged in a single alphabetical sequence of subject headings, together with supporting references.

### *Subject Scope*

The Index embraces all departments of Engineering and Chemical Technology, together with the various Manufacturing Processes based upon them. The distinction between Pure and Applied science is often extremely difficult to use as a basis for selecting or classifying literature, and although this *Index* is centred upon applied science it also includes a great deal of material on the pure science (i.e. the physics or chemistry) of man-made objects and industrial processes. Instruments of all kinds are covered, irrespective of whether their field of application is in pure or applied science. Articles on the chemistry of individual substances are also indexed, as it is only very rarely possible to assert that a chemical species is entirely without technical interest. The *Index* does not cover Industrial Economics, but it does contain references to articles of a mixed technical-economic character. These are invariably signalled by the subheading 'Industry' as opposed to the more usual 'Manufactures' or 'Production' for the technical processes. Technology also overlaps the field of Management at several points, and here the policy of the *Index* is to include from the management sphere only material on such physical and statistical techniques as work study, ergonomics and operational research. Finally, it should be mentioned that the *Index* omits the applied biological sciences from its purview. Here again a number of borderline subjects are included. For instance, the production technology and the chemistry of food, drugs and pesticides are covered, but the physiological chemical aspects are excluded.

### *Index Structure*

The *Index* is designed primarily as a reference tool for tracing articles on highly specific topics. For this purpose the headings are detailed and generally co-extensive with the subjects of the articles listed.

The basic method of index construction may be illustrated by the treatment of such a subject

as 'Bleaching Cotton by hydrogen peroxide'. A single entry is made with supporting references, as follows:

**COTTON, Bleaching, Hydrogen peroxide.**

**HYDROGEN PEROXIDE, Bleaching, Cotton.**

See COTTON, Bleaching, Hydrogen peroxide

**BLEACHING, Cotton. See COTTON, Bleaching**

Additional facilities are given in two situations. When the first two elements of a heading are in the relation of Whole and Part, as in SHIPS, Diesel engines or MOTOR CARS, Bodies, then a second permuted entry (DIESEL ENGINES, Ships and BODIES, Motor cars) is given under the term representing the Part. This is considered desirable because interest in a particular component may often ignore the more comprehensive unit of which it forms a part. Considerations of a similar character arise in connection with Processes and Applications. The *Index* normally enters under the Application with a reference from the Process. There is a case for substituting a second entry for the reference, but it is felt to be less strong than the case for double entry for Whole-Part and Part-Whole, and it is not possible to have double entry for both in view of economic limitations on the size of the *Index*. The second occasion for the use of double entry is the subject which is a proper name, such as the name of a teaching or research institution, or the name of a prominent structure (realised or unrealised) such as the CHANNEL TUNNEL or FORTH ROAD BRIDGE. In these cases, entries are given both under proper name and under the term for the subject illustrated (e.g. BRIDGES, Suspension and TUNNELS).

In this *Index*, the subjects are entered directly into the alphabetical sequence, and not as sub-headings of more general terms, *as long as they can stand alone with unequivocal meaning*, corresponding to the subject of the article. Thus FUEL CELLS are entered directly, and not under ELECTRO-CHEMISTRY or GENERATORS, Electrical. The purpose here is again to facilitate specific topic searching. Though the *Index* is necessarily a cumbersome tool for broad field searching it has been thought desirable to signpost some varieties of subject relationship. *Index* users often discover pertinent material under a term narrower in meaning than that which they consulted first as approach term. Inquirers primarily interested in a particular application of a process may find useful information on other applications of the same process to parallel situations.



Relational signposting in the *Index* is carried out by references of two kinds. In the first place there are "Related heading" references which refer from more to less general terms. A number of classification schemes have been pressed into service in this connection. Not all of the various hierarchical steps are everywhere included. Thus the names of the various plastics are given as references at Plastics, and not via such intermediate groupings as Synthetic Resin Plastics, and Condensation Polymerised Plastics, though occasionally articles will appear covering these relatively generalised concepts. The "related heading" network for Chemistry is of the simplest kind, pending more fundamental work on classification in this field. No attempt is made to link the various inorganic chemicals, and for organic chemicals only the intermediate concepts "Aliphatic" and "Cyclic" and "Heterocyclic" are brought into the system of references. It may be possible with more experience to clothe this skeleton. For reasons of space no references are given between subheadings under the same main heading (e.g. AIRCRAFT, Engines and AIRCRAFT, Gas turbines). To compensate for this absence brief systematic synopses have been added at the beginning of certain of the longer sequences of subheadings.

The other relation-indicating mechanism is inherent in the system of inversion references, of which an example has already been given for

COTTON, Bleaching, Hydrogen peroxide.

The person searching for this subject may also be marginally interested in (a) Hydrogen peroxide, (b) Hydrogen peroxide bleaching, (c) Bleaching of other cellulosic fibres. The routine instruction is simply to note the sub-heading terms and then look them up in the main sequence. Thus at HYDROGEN PEROXIDE will be found entries for material in this substance in general and on its use for bleaching generally: there will also be references locating headings on its particular applications and the hydrogen peroxide bleaching of particular substances. At BLEACHING will be found entries for articles on bleaching generally, and references to headings on the bleaching of individual substances.

### *Order of Elements in Headings*

Most of the subjects indexed are composite in that they cannot usually be expressed in a single word or phrase. The question therefore arises as to which of the various verbal elements required for the heading shall be entry word and generally as to the order of the other elements in the heading.

The order of verbal elements or components is normally so devised that an account of a process applied to a particular application is placed under the term for the Application. Another invariable

rule is that the various word-elements are arranged left to right in order of decreasing concreteness with the most concrete element as the entry word. There are many situations in which recognisable differences in terms of concreteness and abstractness may not be apparent, and a number of rules have been devised for the indexers which regulate heading component order through a consideration of the relationships between the components. The following table illustrates the more commonly used heading constructions and their natural language equivalents.

### *Compounds which specify a particular type or variety of Thing or Material:*

<i>Heading and subheading</i>	<i>Natural language</i>
1. THING <sub>1</sub> , Thing <sub>2</sub> CONVEYORS, Roller	Conveyors <i>with</i> Rollers
2. FUNCTION, Thing PRINTING, Inks	Inks <i>for</i> Printing
3. THING <sub>2</sub> , Thing <sub>1</sub> BUSES, Garages	Garages <i>for</i> Buses
4. THING, Property FABRICS, Coated	Fabrics <i>with</i> Coating
5. THING <sub>2</sub> , Thing <sub>1</sub> , TURBINES, Rotors THING <sub>1</sub> , Thing <sub>2</sub> ROTORS, Turbines	Rotors <i>of</i> Turbines

### *Compounds denoting Actions or Properties of Things or Materials:*

6. THING, Property BEAMS, Strength	Strength <i>of</i> Beams
7. THING, Action upon it IRON, Corrosion	Corrosion <i>of</i> Iron
8. THING <sub>1</sub> , Action upon it, Thing <sub>2</sub> METALS, Forming, Magnetic pulse	Forming <i>of</i> Metals <i>by</i> Magnetic pulses
9. THING, Action upon it, Byproduct PHTHALIC ANHY- DRIDE, Production, Tail gases	Tail gases <i>as byproduct of</i> Production <i>of</i> Phthalic anhydride
10. THING, Its Action LASERS, Welding	Welding <i>by</i> Lasers

### *Other compounds*

11. ACTION <sub>2</sub> , Action <sub>1</sub> PACKAGING, Label- ling	Labelling <i>for</i> Packaging
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## 12. MATERIAL, Diversified role

PLASTICS, Building materials

Plastics as Building materials

N.B.—The subscript figures refer to order in English natural language using prepositions to indicate relationships. The term THING in examples 1–10 includes Materials.

These rules, taken separately or in combination, account for a high proportion of the indexing problems met. It is hoped to amplify them in due course, thus bringing under control the few exceptions which the Index at present contains.

### *Indexing of Locality terms*

A high proportion of the articles indexed deals with objects or activities at particular places. It is of course possible to decide in a general way that the place is or is not significant, but as usual there is a great number of debatable intermediate cases. The radical solution of indexing place in all such cases is ruled out on grounds of space and economics. The practice adopted is as follows:

(1) An article surveying comprehensively the methods practised in a particular country, or a particular species of product produced in a particular country, receives a reference from the country (and from the continent in the case of Africa and South America.

(2) An article dealing with an individual factory or its products does not normally receive a reference from place. Individual structures are not usually specified and referenced by locality, except in the following instances.

*Housing*

*Flats, Maisonnets*

*Churches, Monasteries and similar buildings*

*Government and municipal buildings*

*Town planning topics*

*Mines*

*Pipelines*

*Power stations (including Nuclear and Hydroelectric)*

*Dams*

*Coastal and Flood control works, Drainage, Water engineering*

*Roads*

*Buildings connected with transport.*

### *Ambiguity in headings*

The use of relational criteria in constructing headings goes some way towards reducing ambiguity of index headings. However, the omission of the actual relational terms or phrases can still occasionally lead to uncertainty of interpretation. Often this uncertainty is of a kind that matters little for information retrieval purposes. The heading

METALS, Extrusion, Presses

can mean that the article is about the extrusion by the press or it can be about the press which extrudes. It is doubtful if ambiguity of this kind

is of great practical importance. To distinguish an action, part or property, from the use of an action part or property term to denote a particular kind, e.g. Paint, Stoving—the stoving of paint, and Paint, Stoving, i.e. Stoving paints, the *Index* uses parentheses around a type-specifying word where the distinction seems required. The parentheses have the same sorting value as the commas which they replace.

### *Journals covered*

A list of the journals covered by this volume of the *Index*, together with their publishers' addresses, is to be found at the end of the book. It includes some titles no longer in existence. Society publications simply entitled *Journal of . . .*, *Proceedings of . . .*, or *Transactions of . . .* are entered in the list under the name of the society. (In *Index* citations these journal titles are given in the form used in the journal itself, with the abbreviations shown on page ix.)

Thanks are due to the publishers of many of these journals for supplying copies for indexing and so expediting the work.

### *Selection of articles for the Index*

An attempt has been made to select the more substantial articles published in the journals listed, though no evaluative criteria have been employed. The following types of material are normally excluded: (1) articles comprising less than a page of text and/or diagram in the usual format and typography, (2) brief resumés of symposia and conferences, (3) accounts of exhibitions, and other articles which consist of enumerative descriptions of a variety of products, (4) regular miscellany features, (5) students' features, (6) letters, (7) notes, (8) discussions, (9) book reviews other than essay reviews and review articles.

### *Indexing unit*

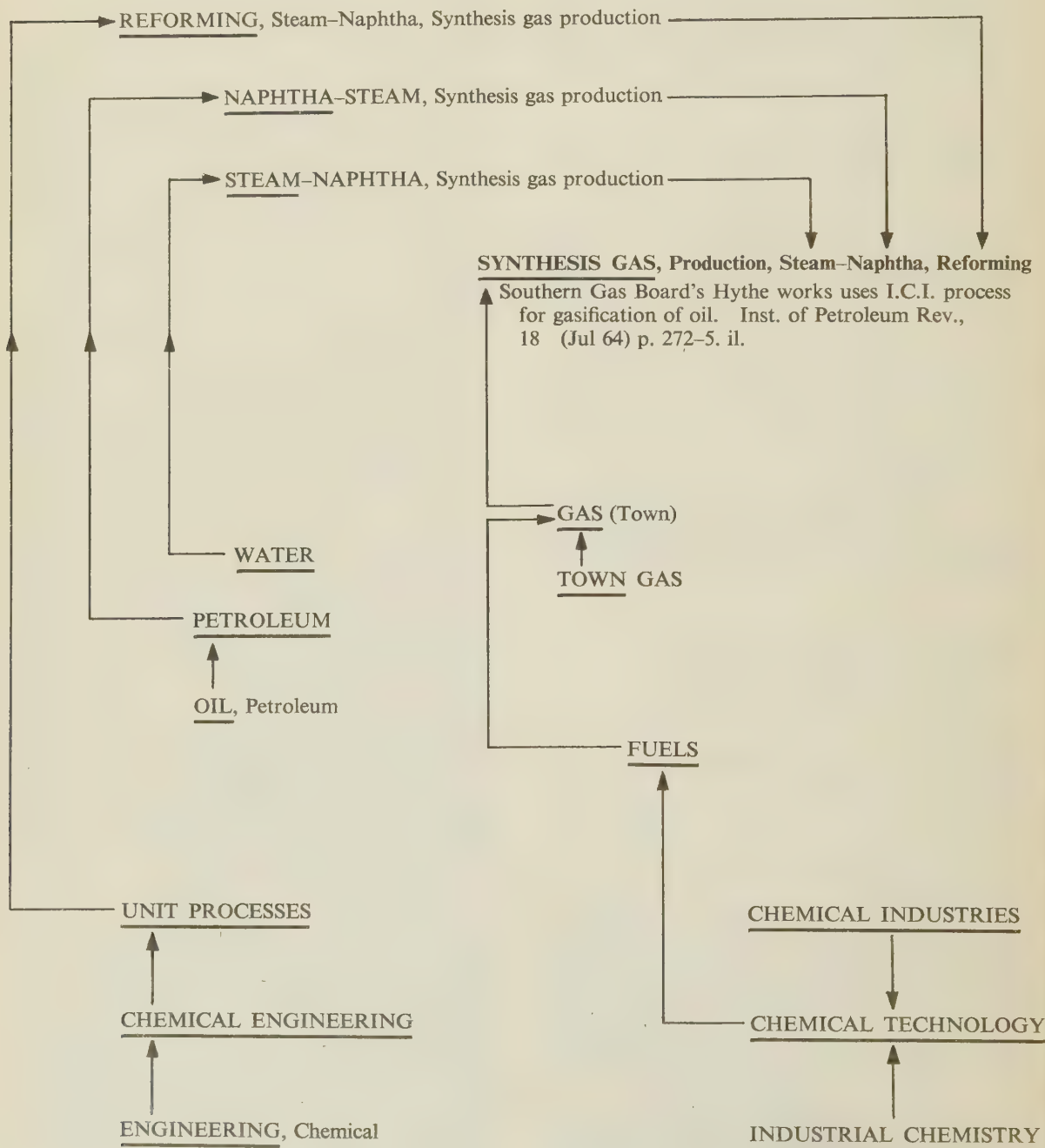
The unit of material indexed is the individual article or the part of an article which appears in a single issue of the journal. The various parts of an article published over several issues are therefore not all given the same heading where they are individually distinctive in subject matter.

### *Synopses*

Brief systematic synopses are provided in some cases where there are long sequences of sub-headings under the same main heading. They are included because no connective references are supplied between sub-headings under the same main heading. They also afford a much simplified bird's eye view of the scope and ramifications of the material indexed under the headings concerned. The terms which are italicised in the synopses are found in their *direct* alphabetical position in the sequence of sub-headings. The terms printed in roman in the synopses are grouping terms only.

# DIAGRAM TO ILLUSTRATE INDEX STRUCTURE

Any of the underlined approach terms can be used for tracing an article on the steam-naphtha process for producing synthesis gas. The arrowed lines represent cross-references.



## List of Abbreviations used

Association	— Ass.	Journal	— J.
British	— Brit.	Page(s)	— p.
Bulletin	— Bull.	Proceedings	— Proc.
Engineer	— Engr.	Quarterly	— Q.
Engineers	— Engrs.	Royal	— R.
Engineering	— Engng.	References	— refs.
Gazette	— Gaz.	Review	— Rev.
Illustrations	— il.	Society	— Soc.
Institute	— Inst.	Transactions	— Trans.
Institution	— Instn.	Continued on later pages	— +

## MAIN SUBJECT FIELDS COVERED

### ENGINEERING

- Control, Computers  
    & Instrumentation
- Mechanical
- Production
- Electrical
- Nuclear
- Structural & Building
- Hydraulic
- Sanitary
- Shipbuilding
- Highway
- Railway
- Automobile
- Aircraft
- Astronautics
- Agricultural

### CHEMICAL TECHNOLOGY

- Corrosion
- Chemical engineering
- Industrial gases
- Ceramics
- Refractories
- Fuels
- Petroleum
- Plastics & Rubber
- Organic chemicals
- Dyes
- Surface active agents
- Paints
- Food and drink
- Inks
- Pharmaceutical
- Photographic chemistry

### MINING

### METALLURGY

### METAL MANUFACTURES

### WOOD MANUFACTURES

### TEXTILES

### CLOTHING

### PRINTING

### PAPERMAKING

### PACKAGING

### WORKS MANAGEMENT

### ECONOMICS OF TECHNICAL PROCESSES

### INDUSTRIAL HEALTH & SAFETY

### TECHNICAL EDUCATION





**A-7A NAVAL AIRCRAFT.** See AIRCRAFT, Naval, Types, Chance Vought A-7A

**A-11 MILITARY AIRCRAFT.** See AIRCRAFT, Military, Types, Lockheed A-11

**A 75 SYSTEM,** Prefabricated buildings. See BUILDINGS, Prefabricated, A 75 system

**A.B.S.** See ACRYLONITRILE-BUTADIENE-STYRENE

**A.C., Average values, Demonstration units**

Defining "mean" and "r.m.s." T. Palmer. *Electrical Rev.*, 174 (31 Jan 64) p.163-4. il.

**A.C., Circuits, Analysis, Phasors, Polar co-ordinates**

Polar investigation of phasor loci. J. J. Jonsson. *International J. of Electrical Engng. Education*, 2 (Nov 64) p.221-32. il.

**A.C., Circuits, Analysis, Vector diagrams**

New deal for vector diagrams. M. G. Scroggie. *Electronics & Power*, 10 (Feb 64) p.47-9. il.

**A.C., Circuits, Hall generators, Magnetic fields measurements.**

See MAGNETIC FIELDS, Measurements, Hall generators, A.C. circuits

**A.C., Circuits, Polyphase, Wye-Delta transformations**

Mnemonic approach to wye-delta transformations. D. G. O. Morris. *International J. of Electrical Engng. Education*, 2 (Nov 64) p.217-19. il.

**A.C., Electric railways.** See RAILWAYS, Electric, A.C.

**A.C., Electric railways, Interference, Communications engineering.** See COMMUNICATIONS, Engineering, Interference, Railways, Electric, A.C.

**A.C., Electric railways, Interference, Power transmission lines.** See POWER TRANSMISSION LINES, Interference, Railways, Electric, A.C.

**A.C., Electrical equipment, Ships.** See SHIPS, Electrical equipment, A.C.

**A.C., Exciters, Turbo-alternators.** See TURBO-ALTERNATORS, Exciters, A.C.

**A.C., Frequency, Correlation with interfacial impedance.** See IMPEDANCE, Interfacial, Correlation with frequency

**A.C., Generators.** See GENERATORS, Electrical, A.C.

**A.C., Injection, Earth fault detection, D.C. power supplies.** See POWER SUPPLIES, D.C., Earth faults, Detection, A.C. injection

**A.C., Machines**

Related Headings:

FREQUENCY, Changers

**A.C., Machines, Polyphase, Harmonics, Elimination**

Polyphase windings with reduced harmonic content. I. R. Smith. *Electrical Times*, 146 (15 Oct 64) p.551-4. il. ref.

**A.C., Machines, Polyphase, Harmonics, Elimination, Double layer graded windings**

A.c. machine windings with reduced harmonic content. B. J. Chalmers. *Proc. of Instn. of Electrical Engrs.*, 111 (Nov 64) p.1859-63. refs.

**A.C., Machines, Stray load losses**

Problems in modern a.c. machines. B. J. Chalmers. *International J. of Electrical Engng. Education*, 2 (Nov 64) p.317-18

Stray losses and associated phenomena in a.c. machines.

B. J. Chalmers. *Electrical Times*, 145 (4 Jun 64) p.873-6. il. refs.

**A.C., Millivoltmeters.** See MILLIVOLTMETERS, A.C.

**A.C., Motors.** See ELECTRIC MOTORS, A.C.

**A.C., Motors.** See ELECTRIC MOTORS, Synchronous

**A.C., Motors, Coiling, Insulated wires.** See WIRES, Insulated, Coiling, Electric motors, A.C.

**A.C., Motors, Extrusion, Insulated wires.** See WIRES, Insulated, Extrusion, Electric motors, A.C.

**A.C., Motors, Fans, Firing, Boilers, Power stations.** See POWER STATIONS, Boilers, Firing, Fans, Electric motors, A.C.

**A.C., Motors, Textile manufactures.** See TEXTILES, Manufactures, Electric motors, A.C.

**A.C., Motors, Winches, Ships.** See SHIPS, Winches, Electric motors, A.C.

**A.C., Network analysers.** See NETWORKS, Electrical, Analysers, A.C.

**A.C., Polarography.** See POLAROGRAPHY, A.C.

**A.C., Power supplies.** See POWER SUPPLIES, A.C.

**A.C., Servomotors.** See SERVOMOTORS, Electric, A.C.

**A.C., Superconductivity.** See SUPERCONDUCTIVITY, A.C. losses

**A.C., Systems, Ships.** See SHIPS, Electrical equipment, A.C.

**A.C., Voltaic cells.** See CELLS, Voltaic, A.C.

**A.E.C. COMMERCIAL VEHICLES.** See VEHICLES, Commercial, Types, A.E.C.

**A.E.C. MARSHAL 2GM6RAS COMMERCIAL VEHICLES.**

See VEHICLES, Commercial, Types, A.E.C. Marshal 2GM6RAS

**A.E.C. MARSHAL LORRIES.** See LORRIES, Types, A.E.C. Marshal

**A.E.C. REGAL 6-JONCKHEERE MOTOR COACHES.** See MOTOR COACHES, Types, A.E.C. Regal 6-Jonckheere

**AER MACCHI MOTOR CYCLES.** See MOTOR CYCLES, Types, AER Macchi

**A.E.R.E** See ATOMIC ENERGY RESEARCH ESTABLISHMENT, Harwell

**A.J.S. MOTOR CYCLES.** See MOTOR CYCLES, Types, A.J.S.

**ABATTOIRS.** See SLAUGHTERHOUSES

**ABBOTSINCH**

See

AIRPORTS, Terminal buildings, Abbotsinch

**ABERDEEN**

See

COASTAL WORKS, Aberdeen

TRAMWAYS, Aberdeen

**ABERDEEN. UNIVERSITY. Natural Philosophy Building**

Natural philosophy building. Architects' J., 139 (29 Jan 64) p.251+. il.

**ABERTHAW**

See

POWER STATIONS, Aberthaw

**ABINGDON**

See

ESSO ELASTOMERS LABORATORY, Abingdon

ESSO RESEARCH LABORATORIES, Abingdon

**ABLATION**, Astronautics vehicles. See **ASTRONAUTICS**,

Vehicles, Re-entry into atmosphere, Ablation

**ABRASION**

Related Headings:

FILING

**ABRASION**, Antimony. See **ANTIMONY**, Abrasion**ABRASION**, Fabrics. See **FABRICS**, Abrasion**ABRASION**, Metals. See **METALS**, Abrasion**ABRASION**, P.V.C., Coverings, Floors. See **FLOORS**,

Coverings, P.V.C., Abrasion

**ABRASIVES**

Abrasives for industry, pt.1: natural substances. D.

Warburton-Brown. Machinery, 105 (30 Sep 64) p.795-800.

il.

Abrasives for industry, pt.2. D. Warburton-Brown. Machinery, 105 (4 Nov 64) p.1087-90. il.

**ABRASIVES**

Related Headings:

CORUNDUM

DIAMONDS, Grit

**ABRASIVES**, Coated, Backing cloth, Faults

Statistical evaluation of cloth surface quality—applications for coated abrasives. J. H. Fairfield &amp; R. S. Bingham. Quality Engr., 28 (Mar/Apr 64) p.47-53. il. refs.

Statistical evaluation of cloth surface quality—applications for coated abrasives (contd.) J. H. Fairfield &amp; R. S.

Bingham. Quality Engr., 28 (Jul/Aug 64) p.120-1

**ABSORBERS**, Waves, Ports. See **PORTS**, Waves, Absorbers**ABSORPTION**

Brush up your absorption theory. F. A. Holland. Brit.

Chemical Engrng., 9 (May 64) p.294-9. il.

**ABSORPTION**

Related Headings:

CHEMISORPTION

**ABSORPTION**, Amino acids, Fermentation, Brewing. See

BREWING, Fermentation, Yeast, Amino acids, Absorption

**ABSORPTION**, Carbon dioxide. See **CARBON DIOXIDE**,

Absorption

**ABSORPTION**, Carbon dioxide removal, Purification, Towngas. See **GAS** (Town) Purification, Carbon dioxide

removal, Absorption

**ABSORPTION**, Dyeing, Textiles. See **TEXTILES**, Dyeing,

Absorption

**ABSORPTION**, External surfaces, Textiles. See **TEXTILES**,

Surfaces, External, Absorption

**ABSORPTION**, Gases. See **GASES**, Absorption**ABSORPTION**, Hydrogen, Sulphuric acid—Thiourea solutions,Nickel cathodes. See **CATHODES**, Nickel, Sulphuric

acid—Thiourea solutions, Hydrogen absorption

**ABSORPTION**, Sulphur dioxide. See **SULPHUR DIOXIDE**,

Absorption

**ABSORPTION**, X-rays, Metals. See **METALS**, X-ray absorption**ABSORPTION—CONDUCTIVITY CELLS**, Sulphur dioxidedetermination, Power stations, Air pollution. See **AIR****POLLUTION**, Power stations, Sulphur dioxide, Determina-

tion, Absorption—Conductivity cells

**ABSORPTION MAGNETO-OPTICAL SPECTROSCOPY**. See**SPECTROSCOPY**, Magneto-optical, Absorption**ABSORPTION SPECTROSCOPY**, Crystals, Nickel fluosilicate.See **NICKEL FLUOSILICATE**, Crystals, Spectroscopy,

Absorption

**ABSORPTION SPECTROSCOPY**, Organic solutions, Organicadducts, Uranyl salts. See **URANYL SALTS**, Organic

adducts, Organic solutions, Spectroscopy, Absorption

**ABSTRACTS**, Technical literature. See **TECHNICAL**

LITERATURE, Abstracts

**ABU DHABI**

See

PETROLEUM, Production, Abu Dhabi

PETROLEUM, Production, Murban

**ACARICIDAL TAPE**, Sealing, Paper sacks, Food storage. See

FOOD, Storage, Sacks, Paper, Sealing, Tape, Acaricidal

**ACCELERATED WEATHERING TESTS**, Oxidation, Asphalt.See **ASPHALT**, Oxidation, Accelerated weathering tests**ACCELERATION**, Motor cars. See **MOTOR CARS**,

Acceleration

**ACCELERATORS**, Electron

High-energy accelerators for nuclear-physics research.

J. B. Adams. Proc. of Instn. of Electrical Engrs., 111

(Apr 64) p.856-68. il.

**ACCELERATORS**, Electron

Related Headings:

SYNCHROTRONS, Electron

**ACCELERATORS**, Electron, Linear

Linear accelerators—some engineering developments since

1947. M. G. Kelliher. Nuclear Engrng., 9 (Jun 64)

p.208-12. il. refs.

**ACCELERATORS**, Electron, Linear, Waveguides, Irises

Effect of iris spacing on the performance of electron

linear accelerators. G. Saxon &amp; I. White. Proc. of Instn.

of Electrical Engrs., 3 (Mar 64) p.465-70. il. refs.

**ACCELERATORS**, Injection moulding, Rubber. See**RUBBER**, Moulding, Injection, Accelerators**ACCELERATORS**, Particle

Particle accelerator applications. E. Vernin. Nuclear

Engrng., 9 (Jun 64) p.201-3. il. refs.

Research in high-energy physics at NIRS. T. G.

Pickavance. R. &amp; D (Jul 64) p.31. il.

**ACCELERATORS**, Particle, Nuclear energy education. See**NUCLEAR ENERGY**, Education, Particle accelerators**ACCELERATORS**, Proton

High-energy accelerators for nuclear-physics research.

J. B. Adams. Proc. of Instn. of Electrical Engrs., 111

(Apr 64) p.856-68. il.

Rutherford High-Energy Laboratory. Engineer, 217 (1 May

64) p.775

**ACCELERATORS**, Proton

Related Headings:

CYCLOTRONS

SYNCHROTRONS, Proton

**ACCELERATORS**, Protons, Targets, Polarised

Regimented protons: a target for physicists. P. Stubbs.

New Scientist, 24 (29 Oct 64) p.307. il.

**ACCELERATORS**, Vulcanisation, Rubber. See **RUBBER**,

Vulcanisation, Accelerators

**ACCELEROMETERS**

Accelerometers. Design &amp; Components in Engrng. (8 Oct 64)

p.35-42. il.

**ACCELEROMETERS**, Piezoelectric

Development and applications of a piezoresistive strain

gauge accelerometer. D. E. Lovelace. Environmental

Engrng. Q. (Dec 63) p.11-13. il. refs.

**ACCELEROMETERS**, Vibration testing. See **VIBRATIONS**,

Testing, Accelerometers

**ACCESS**, Random, Storage units, Computers. See **COMPUTERS**,

Storage units, Random access

**ACCIDENT PRONENESS**

Accident and psychological stress. H. Thomae. Inter-

national J. of Production Research, 2 (Sep 63) p.229-33.

refs.

**ACCIDENTS**

Related Headings:

COLLISIONS

**ACCIDENTS**, Aircraft. See **AIRCRAFT**, Accidents**ACCIDENTS**, Brewing. See **BREWING**, Accidents**ACCIDENTS**, Building. See **BUILDING**, Accidents



ACCIDENTS, Coal mining. See COAL, Mining, Accidents  
 ACCIDENTS, Electric railways. See RAILWAYS, Electric, Accidents

ACCIDENTS, Fork trucks. See FORK TRUCKS, Accidents  
**ACCIDENTS, Industrial, Investigations**

British accident investigation method is ineffective. S. Nicolet. *Industrial Safety*, 10 (Jul 64) p.359-60

ACCIDENTS, Motorways. See MOTORWAYS, Accidents

ACCIDENTS, Naval aircraft. See AIRCRAFT, Naval, Accidents

ACCIDENTS, Painting, Buildings. See BUILDINGS, Painting, Accidents

ACCIDENTS, Permanent way. See PERMANENT WAY, Accidents

ACCIDENTS, Quarrying. See QUARRYING, Accidents

ACCIDENTS, Railways. See RAILWAYS, Accidents

ACCIDENTS, Roads. See ROADS, Accidents

ACCIDENTS, Rubber manufactures. See RUBBER, Manufactures, Accidents

ACCIDENTS, Submarines. See SUBMARINES, Accidents

ACCIDENTS, Trawlers. See TRAWLERS, Accidents

ACCOUNTING, Punched cards. See PUNCHED CARDS, Accounting

#### ACCOUNTING MACHINES

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ACID DYES, Dyeing, Polyamides fibres. See POLYAMIDES, Fibres, Dyeing, Acid dyes

ACID DYES, Powders, Hides. See HIDES, Powders, Dyes, Acid

ACID DYES, Sorption, Wool. See WOOL, Sorption, Dyes, Acid

ACID LINED CUPOLAS. See CUPOLAS, Acid lined

ACID RESISTANCE, Alumino-silicate glass. See GLASS, Alumino-silicate, Acid resistance

ACID RESISTANCE, Borosilicate glass. See GLASS, Borosilicate, Acid resistance

ACID RESISTANCE, Soda-Lime-Silica glass. See GLASS, Soda-Lime-Silica, Acid resistance

ACID RESISTS, Plates, Photoengraving. See PHOTOENGRAVING, Plates, Resists

#### ACIDS

Related Headings:

ALLENIC ACID  
 AMINO ACIDS  
 ASCORBIC ACID  
 BENZENECARBOXYLIC ACIDS  
 BORIC ACID

## ACIDS

## Related Headings—cont.

CARBOXYLIC ACIDS  
 CHLOROGENIC ACID  
 CITRIC ACID  
 E.D.T.A.  
 FORMIC ACID  
 FUMARIC ACID  
 HUMIC ACIDS  
 HYDROBROMIC ACID  
 HYDROCHLORIC ACID  
 HYDROFLUORIC ACID  
 2-HYDROXY-2-PHENYLBUTYRIC ACID  
 KETO ACIDS  
 LACTIC ACID  
 MALIC ACID  
 MALONIC ACID  
 MERCURIC ACID  
 METHACRYLIC ACID  
 MONTANIC ACID  
 NAPHTHENIC ACIDS  
 NEOCHLOROGENIC ACID  
 NITRIC ACID  
 ORGANIC ACIDS  
 OXALIC ACID  
 PERACETIC ACID  
 PERCHLORIC ACID  
 PHOSPHORIC ACID  
 PHTHALIC ACID  
 PICRIC ACID  
 PODOCARPIC ACID  
 PROPIONIC ACID  
 SIALIC ACID  
 SILICIC ACID  
 STEARIC ACID  
 SULPHURIC ACID  
 THIOBARBITURIC ACID  
 TRICHLOROACETIC ACID  
 ACIDS, Catalysts, Absorption, Carbon dioxide. See CARBON DIOXIDE, Absorption, Acid catalysts  
 ACIDS, Catalysts, Hydrolysis, Esters. See ESTERS, Hydrolysis, Catalysts, Acids  
 ACIDS, Controlled atmosphere stored apples. See APPLES, Stored (Controlled atmospheres) Acids  
 ACIDS, Fatty. See FATTY ACIDS  
 ACIDS, Fatty, Cake flour. See FLOUR, Cake, Fatty acids  
 ACIDS, Fatty, Capparidaceae seed. See CAPPARIDACEAE, Seed, Fatty acids  
 ACIDS, Fatty, Citrullus colocynthis seed. See CITRULLUS COLOCYNTHIS, Seed, Fatty acids  
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 ACIDS, Fatty, Oils, Paint vehicles. See PAINT, Vehicles, Oils, Determination of fatty acids  
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 ACIDS, Fatty, Flour. See FLOUR, Fatty acids  
 ACIDS, Fatty, Stromateus cinereus. See STROMATEUS CINEREUS, Fatty acids  
 ACIDS, Hops. See HOPS, Acids  
 ACIDS, Hydrolysis, Glycosides. See GLYCOSIDES, Hydrolysis, Acids  
 ACIDS, Polymerisation, Ammonium molybdate. See AMMONIUM MOLYBDATE, Polymerisation, Acids  
 ACIDS, Polymerisation, Sodium molybdate. See SODIUM MOLYBDATE, Polymerisation, Acids  
 ACIDS, Potentiometric titrations, Molten potassium nitrate  
 Potentiometric acid-base titrations in molten salts, pt.2: titration of  $\text{Na}_2\text{HPO}_4$ ,  $\text{Na}_2\text{HPO}_4$ ,  $\text{NaPO}_3$ , and  $\text{Na}_4\text{P}_2\text{O}_7$  with  $\text{Na}_2\text{O}_2$  in molten  $\text{KNO}_3$ . A. M. Shams El Din & A. A. A. Gerges. *Electrochimica Acta*, 9 (Jan 64) p.123-31. il. refs.

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## ACIDS, Spillage, Control

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## ACOUSTICS. See SOUND

ACOUSTICS, Buildings. See BUILDINGS, Acoustics

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ACOUSTICS, Room, Sound reproduction. See SOUND, Reproduction, Room acoustics

ACOUSTICS, Studios, Radio. See RADIO, Studios, Acoustics

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## ACRYLIC FIBRES

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ACRILAN

COURTELLE

ORLON

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ACRYLIC FIBRES, Knitting yarns. See KNITTING, Yarns, Acrylic fibres

ACRYLIC FIBRES, Yarns. See YARNS, Acrylic fibres

ACRYLIC FIBRES-WORSTED, Fabrics, Suitings. See SUITINGS, Fabrics, Acrylic fibres-Worsted

ACRYLIC MODIFIED ALKYD RESINS. See PAINT, Alkyd resins, Modified, Acrylic

## ACRYLIC PLASTICS

## Related Headings:

PERSPEX

POLYACRYLIC ACID

POLY-*n*-BUTYL METHACRYLATE

POLYMETHACRYLATES

POLYMETHYL METHACRYLATE

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ACRYLIC PLASTICS, Paint. See PAINT, Acrylic

ACRYLIC PLASTICS, Paint, Bodies, Commercial vehicles. See VEHICLES, Commercial, Bodies, Paint, Acrylic

ACRYLIC PLASTICS, Paint, Bodies, Motor cars. See MOTOR CARS, Bodies, Paint, Acrylic

ACRYLIC PLASTICS, Paint, Bodies, Motor vehicles. See MOTOR VEHICLES, Bodies, Paint, Acrylic

ACRYLIC PLASTICS, Paint, Evaporators, Refrigerators. See REFRIGERATORS, Evaporators, Painting, Acrylic paint.

ACRYLIC PLASTICS, Paint, Reinforced plastics, Bodies, Commercial vehicles. See VEHICLES, Commercial, Bodies, Plastics, Reinforced, Paint, Acrylic

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ACTIVATED SLUDGE PROCESS, Effluent treatment, Water pollution. See WATER, Pollution, Effluent treatment, Activated sludge process

ACTIVATED-SLUDGE PROCESS, Sewage treatment. See SEWAGE, Treatment, Activated-sludge process

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ADDUCTS, Organic, Uranyl salts. See URANYL SALTS, Organic adducts

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FISHING, Industry, Aden

ADHESION, Cords, Tyres. See TYRES, Cords, Adhesion

ADHESION, Fibre glass cords, Tyres, Aircraft. See AIRCRAFT, Tyres, Cords, Fibre glass, Adhesion

ADHESION, Paint. See PAINT, Adhesion

ADHESION, Paint, Steel. See STEEL, Painted, Film

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ADHESION, Polypropylene. See POLYPROPYLENE, Adhesion

ADHESION, Polythene. See POLYTHENE, Adhesion

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See ELECTRONICS, Components, Identification, Markers, Adhesive

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- ADHESIVES, Bonding, Plywood. See PLYWOOD, Bonding, Adhesives
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- ADHESIVES, Building materials**
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- ADHESIVES, Joinery. See JOINERY, Adhesives
- ADHESIVES, Laminating, Fabrics. See FABRICS, Laminating, Adhesives
- ADHESIVES, Lipping, Fibre board. See FIBRE BOARD, Lipping, Adhesives
- ADHESIVES, Neoprene, Fabrics, Upholstery. See UPHOLSTERY, Fabrics, Adhesives, Neoprene
- ADHESIVES, Nylon, Belts, Conveyors. See CONVEYORS, Belts, Nylon, Adhesives
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- ADSORPTION, Chloride, Hydrochloric acid—Perchloric acid, Solutions, Platinised platinum anodes. See ANODES, Platinum, Platinised, Hydrochloric acid—Perchloric acid solutions, Chloride adsorption
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- ADSORPTION, Electrodes, Polarography, Organic chemicals. See ORGANIC CHEMICALS, Polarography, Electrodes, Adsorption
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- ADSORPTION, Gases. See GASES, Adsorption
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BOUNDARY LAYER

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GAS FLOW

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**AIR TRANSPORT**

Related Headings:

AIRPORTS

BRITISH OVERSEAS AIRWAYS CORPORATION

**AIR TRANSPORT—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

## Particular countries &amp; routes

*Great Britain*

*Great Britain—South America*

*English Channel*

*Europe*

*Western Europe*

*Bilbao—London*

*Asia*

*China*

*India*

*Pakistan*

*Middle East*

*North America*

*U.S.A.*

*Hawaii*

*Canada*

*West Indies*

*South America*

*Colombia*

*Australia*

## Statistics

Organisations

Costs

Licences

Equipment & Facilities

*Control systems*

*Communications engineering*

*Television*

*Ground facilities*

*Terminal buildings*

## Operations

*Traffic control*

## Types of transport operations

*Chartered*

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Avianca subsidiaries open up Colombia. P. Clegg. *Aeroplane & Commercial Aviation News*, 108 (8 Oct 64) p.4+. il.

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**AIR TRANSPORT, Control systems**

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**AIRCRAFT**

Related Headings:

AERODYNAMICS  
AEROFOILS  
AUTOGYROS  
BALLOONS  
FLYING  
GLIDERS  
HELICOPTERS  
PARACHUTING

**AIRCRAFT—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

*History*

*Research*

*Models*

*Problems*

*Safety*

*Accidents*

*Collisions*

*Vibrations*

*Flutter*

*Noise*

*Corrosion*

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*Tyres*

*Cabins*

*Interior design*

*Cockpits*



## AIRCRAFT—SUBHEADINGS—Synopsis—cont.

- Exits
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  - Air launched
  - Freight
  - Military
    - Target
  - Naval
  - Types
- Ancillaries
  - Ground support equipment
  - Ground power units

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## AIRCRAFT, Airport movements. See AIRPORTS, Aircraft movements

## AIRCRAFT, Bomber. See BOMBER AIRCRAFT

## AIRCRAFT, Busbars, Protection, Symmetrical component networks

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**ALCOHOLIC BEVERAGES**

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BREWING

CIDERS

SPIRITS

WINES

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GLYCOLS

ISOPROPYL ALCOHOL

MERCAPTANS

METHYL ALCOHOL

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See

HYDROELECTRIC POWER STATIONS, Aldeadávila

**ALDEHYDES, Aromatic, Electrolytes, Rotating brass amalgam cathodes. See CATHODES, Brass amalgam, Rotating, Aromatic aldehyde electrolytes****ALDEHYDES, Oxidation, Platinum anodes. See ANODES, Platinum, Aldehyde oxidation****ALDERGROVE**

See

AIRPORTS, Terminal buildings, Aldergrove

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Aldose-amino-compounds reactions

**ALEURONE, Barley. See BARLEY, Aleurone****ALFA ROMEO GIULIA 1600 SPIDER CARS. See MOTOR**

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PETROLEUM, Production, Algeria

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CATHEDRALS, Algiers

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ALGOL, Languages, Programs, Computers, Alignment calculations, Shafts, Propellers, Ships. See SHIPS, Propellers, Shafts, Alignment, Calculations, Computers, Programs, Languages, Algol

ALGOL 60, Program languages, Simulators, Computers. See COMPUTERS, Simulators, Programs, Languages, Algol 60

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ALIPHATIC COMPOUNDS

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ACETIC ANHYDRIDE  
ACETONE  
ACETYLENE  
ALCOHOLS, Aliphatic  
ALKENYL PHOSPHORAMIDATES  
ALKENYLARENES  
ALKYLCHLOROMETHYL ETHERS  
ALKYLOXYMETHYL ETHERS  
ALLENIC ACID  
ALUMINIUM TRIETHYL  
AMINO ACIDS, Aliphatic  
AMYL ALCOHOLS  
BROMOSUCCINIMIDE  
BUTADIENE  
BUTANE  
BUTYL ALCOHOL  
n-BUTYLAMINE  
CHLOROFORM  
CHROMIUM ACETYLACETONE  
CITRIC ACID  
β-CYANOETHYL ALCOHOLS  
DIBUTYL SULPHIDES  
DIMETHYL ACETYLENEDICARBOXYLATE  
DIMETHYL SULPHOXIDE  
DIMETHYLGLYOXIME  
DIMETHYLHYDRAZINE  
DODECYLAMINE  
ETHANE  
ETHANOLAMINE  
ETHERS, Aliphatic  
ETHYL ACETATE  
ETHYL ALCOHOL  
ETHYL CROTONATE  
ETHYL DODECYL SULPHOXIDE  
ETHYLENE  
ETHYLENE DIAMINE  
ETHYLENE DIBROMIDE  
ETHYLENE GLYCOL  
FATTY ACIDS  
FATTY ESTERS  
FORMALDEHYDE  
FORMAMIDE  
GLYCEROL  
HALOTHANE  
HEXANE  
INDENE

ALIPHATIC COMPOUNDS

Related Headings—cont.

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LACTIC ACID  
MERCAPTANS  
METHANE  
METHYL ALCOHOL  
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METHYL ESTERS  
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METHYL METHACRYLATE  
2-METHYL-1, 3-PENTADIENE  
METHYLENE  
MONTANIC ACID  
NITROMETHANE  
OXALIC ACID  
PARAFFINS  
PENTANE  
POLYPROPYLENE GLYCOL  
PROPANE  
PROPIONIC ACID  
PROPYL ACETATE  
PROPYL ALCOHOL  
STEARIC ACID  
STEARYL ALCOHOL  
TETRACYANOETHYLENE  
THIOUREA  
TRIBUTYL PHOSPHATE  
TRICHLOROACETIC ACID  
TRICHLOROETHYLENE  
TRICHLOROFLUOROMETHANE  
TRIMETHYL PHOSPHATE  
VINYL SULPHONE GROUPS  
XANTHATES

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ALIPHATIC HYDROGEN, Distribution, Vitrinite, Macerals, Bituminous coal. See COAL, Bituminous, Macerals, Vitrinite, Aliphatic hydrogen distribution

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CAUSTIC SODA

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ATISINE

BETAINE

CAFFEINE

DENDROBINE

ESERAMINE

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See

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**ALUMINA**

Related Headings:

CORUNDUM  
SAPPHIRE

ALUMINA, Capacitors. See CAPACITORS, Aluminium oxide

ALUMINA, Cement. See CEMENT, Aluminous

ALUMINA, Ceramics, Coatings. See COATINGS, Alumina ceramics

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ALUMINA, High, Cement, Concrete structures. See STRUCTURES, Concrete, High alumina cement

ALUMINA, Isotopic exchange, Oxygen labelled organic chemicals. See ORGANIC CHEMICALS, Labelled, Oxygen, Isotopic exchange, Alumina

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ALUMINA-SILICA-BARIA GLASS, Glass-ceramics production. See GLASS-CERAMICS, Production, Glass, Baria-alumina-silica

ALUMINA-TITANIA-SILICA-LITHIA GLASS, Glass-ceramics production. See GLASS-CERAMICS, Production, Glass, Lithia-alumina-titania-silica

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**ALUMINIUM—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

Research  
 Physico-chemical aspects  
   Crystals  
   Compression tests  
   Friction  
   Corrosion  
   Oxidation  
 Technical processes  
   Production  
   Industrial design  
   Manufactures  
     Melting  
     Casting  
       Foundries  
     Die casting  
   Rolling  
   Extrusion  
   Deep drawing  
   Heat treatment  
     Recrystallisation  
   Joining  
     Brazing  
     Welding  
     Fasteners  
   Finishing  
     Blackening  
     Anodising  
     Coating  
   Handling  
   Storage  
 Kinds of aluminium  
   Welded  
   Reinforced  
 Aluminium products  
   Castings  
   Scrap  
 Fields of application  
   Building materials  
   Packaging materials  
  
 Alloys  
 Compounds

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**ALUMINIUM, Alloys, Interference-fit pin joints. See**

JOINTS, Pin, Interference-fit, Aluminium alloy

**ALUMINIUM, Alloys, Internal combustion engine components. See**

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MOTOR CYCLES, Parts, Aluminium alloys

**ALUMINIUM, Alloys, Motor vehicle parts. See**

MOTOR VEHICLES, Parts, Aluminium alloys

**ALUMINIUM, Alloys, Panels, Raised floors. See**

FLOORS, Raised, Panels, Aluminium alloys

**ALUMINIUM, Alloys, Pipes, Disposal, Effluents, Poly-oxypropylene production. See**

POLYOXYPROPYLENE, Production, Effluents, Disposal, Pipes, Aluminium alloys

**ALUMINIUM, Alloys, Plates. See**

PLATES, Aluminium alloy

**ALUMINIUM, Alloys, Plates, Aircraft structures. See**

AIRCRAFT, Structures, Plates, Aluminium alloy

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**ALUMINIUM, Alloys, Supersonic aircraft structures. See**

AIRCRAFT, Supersonic, Structures, Aluminium alloys

**ALUMINIUM, Alloys, Tanks, Road tankers. See**

TANKERS, Road, Tanks, Aluminium alloys

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**ALUMINIUM, Anodised, Trim, Motor cars. See**

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**ALUMINIUM, Bodies, Passenger rolling stock, Railways.** See **ROLLING STOCK (Passenger, Railways) Bodies, Aluminium**

**ALUMINIUM, Booster components, Astronautics vehicles.** See **ASTRONAUTICS, Vehicles, Boosters, Components, Aluminium**

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**ALUMINIUM, Busbars, Electrical installations, Factories.** See **FACTORIES, Electrical installations, Busbars, Aluminium**

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Pretreatment for aluminium and zinc (abridgement)

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**ALUMINIUM, Commercial vehicle parts.** See **VEHICLES, Commercial, Parts, Aluminium**

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**ALUMINIUM, Containers, Freight.** See **FREIGHT, Containers, Aluminium**

**ALUMINIUM, Containers, Oranges.** See **ORANGES, Containers, Aluminium**

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- ANALYSIS, Animal feedingstuffs. See ANIMAL FEEDING-STUFFS, Determination of lysine
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- ANALYSIS, Basil oil. See BASIL OIL, Analysis
- ANALYSIS, Beer. See BEER, Determination of sulphur dioxide
- ANALYSIS, Biological materials. See BIOLOGICAL MATERIALS, Determination of calcium
- ANALYSIS, Biological materials. See BIOLOGICAL MATERIALS, Determination of cerium-141
- ANALYSIS, Biological materials. See BIOLOGICAL MATERIALS, Determination of cerium-144
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- ANALYSIS, Bituminous coal. See COAL, Bituminous, Analysis
- ANALYSIS, Blackcurrants. See BLACKCURRANTS, Determination of ascorbic acid
- ANALYSIS, Boron determination. See BORON, Determination
- ANALYSIS, Bran, Rice. See RICE, Bran, Insecticides, Malathion, Residues, Determination
- ANALYSIS, Bread. See BREAD, Determination of stearyl tartrate
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- ANALYSIS, Carbon monoxide determination, Ventilation, Underpasses. See UNDERPASSES, Ventilation, Carbon monoxide determination
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CHROMATOGRAPHY  
COLORIMETRY  
COMPLEXOMETRIC ANALYSIS  
CONDUCTIMETRY  
GAS ANALYSERS  
GRAVIMETRY  
MICROANALYSIS  
NUCLEAR MAGNETIC RESONANCE  
PHOTOLYSIS, Flash  
PHOTOMETRIC TITRATIONS  
PHOTOMETRY, Flame  
POLARIMETRY  
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POTENTIOMETRIC TITRATIONS  
PROXIMATE ANALYSIS  
PYROHYDROLYSIS  
RADIOACTIVATION, Analysis  
REFRACTOMETRY  
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SPECTROPHOTOMETERS  
SPECTROPHOTOMETRY  
SPECTROSCOPY, Absorption  
SPECTROSCOPY, Analysis  
SPECTROSCOPY, Arc  
SPECTROSCOPY, Emission  
SPECTROSCOPY, Infra-red



## ANALYSIS, Chemical

Related Headings—cont.

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THERMAL CONDUCTIVITY ANALYSIS  
THERMOGRAVIMETRY  
TITRATIONS  
TITRIMETERS  
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ANALYSIS, Coal ash. See COAL, Ash, Analysis

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ANALYSIS, Cocoa beans. See COCOA, Beans, Storage, Fumigation, Methyl bromide, Residues, Determination

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ANALYSIS, Colour additives, Meat. See MEAT, Additives, Colour, Determination

ANALYSIS, Dithiocarbamates. See DITHIOCARBAMATES, Analysis

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ANALYSIS, Flue gas. See FLUE GAS, Determination of sulphur trioxide

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ANALYSIS, Food packaging plastics. See FOOD, Packaging, Plastics, Ultraviolet absorbers, Determination

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ANALYSIS, Grass. See GRASS, Determination of nitrogen

ANALYSIS, Hafnium-zirconium. See HAFNIUM-ZIRCONIUM, Analysis

ANALYSIS, Hay. See HAY, Determination of lignin

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ANALYSIS, Hop oil. See HOPS, Oil, Oxygenated fraction, Methyl esters, Determination

ANALYSIS, Hydroxyl group determination. See HYDROXYL GROUPS, Determination

ANALYSIS, Inorganic pigments, Paint. See PAINT, Pigments, Inorganic, Analysis

ANALYSIS, Jatropha curcas seed oil. See JATROPHA

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ANALYSIS, Juices, Apples. See APPLES, Juices, Determination of sulphur dioxide binding compounds

ANALYSIS, Liquors, Digesters, Sulphate pulp. See PULP, Sulphate, Digesters, Liquors, Analysis

ANALYSIS, Macerals, Bituminous coal. See COAL, Bituminous, Macerals, Analysis

ANALYSIS, Manganese alloys. See MANGANESE, Alloys, Determination of manganese

ANALYSIS, Mild steel. See STEEL, Mild, Determination of carbon

ANALYSIS, Monosaccharides. See MONOSACCHARIDES, Analysis

ANALYSIS, Muscles, Frozen fish. See FISH, Frozen, Muscles, Determination of inosine 5'-monophosphate

ANALYSIS, Nickel. See NICKEL, Determination of carbon

ANALYSIS, Ores. See ORES, Analysis

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ANALYSIS, Petroleum products. See PETROLEUM, Products, Analysis

ANALYSIS, Polypeptides. See POLYPEPTIDES, Analysis

ANALYSIS, Protein. See PROTEIN, Analysis

ANALYSIS, Pyrethrum. See PURETHRUM, Analysis

ANALYSIS, Ruthenium. See RUTHENIUM, Analysis

ANALYSIS, Sea water. See SEA, Water, Determination of ammonia

ANALYSIS, Sea water. See SEA, Water, Determination of cerium-141

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ANALYSIS, Sewage. See SEWAGE, Determination of zinc

ANALYSIS, Silicate rock. See ROCK, Silicates, Analysis

ANALYSIS, Soil. See SOIL, Determination of radon

ANALYSIS, Soil. See SOIL, Determination of sulphates

ANALYSIS, Soluble collagen. See COLLAGEN, Soluble, Analysis

ANALYSIS, Solutions, Electroplating. See ELECTROPLATING, Solutions, Analysis

ANALYSIS, Sour milk. See MILK, Sour, Determination of alcohol

ANALYSIS, Sulphated oils. See SULPHATED OILS, Determination of unsulphated oils

ANALYSIS, Sulphonamides determination. See SULPHONAMIDES, Determination

ANALYSIS, Tea. See TEA, Analysis

ANALYSIS, Thallium. See THALLIUM, Analysis

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ANALYSIS, Thiuram disulphides. See THIURAM DISULPHIDES, Analysis

ANALYSIS, Thorium. See THORIUM, Analysis

ANALYSIS, Town gas. See GAS (Town) Constituents, Iron carbonyl, Determination

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ANALYSIS, Toxic gases determination. See GASES, Toxic, Determination

ANALYSIS, Vegetable oils. See OILS, Vegetable, Analysis

ANALYSIS, Vinasses, Molasses. See MOLASSES, Vinasses, Determination of betaine

ANALYSIS, Water. See WATER, Determination of nitrates

ANALYSIS, Wines. See WINES, Determination of sulphur dioxide

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**ANGLESEY**

See

NUCLEAR POWER STATIONS, Wylfa

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**ANIMAL FEEDINGSTUFFS**

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FURZE

GRAIN, Animal feedingsuffs

GRASS, Meal

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SILAGE

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- ANNEALING, Tetrahedra, Stacking faults, Quenched gold.** See GOLD, Quenched, Stacking faults, Tetrahedra, Annealing
- ANNEALING, Titanium.** See TITANIUM, Annealing
- ANNEALING, Vacancies, Quenched copper.** See COPPER, Quenched, Vacancies, Annealing
- ANNEALING, Vacancies, Quenched gold.** See GOLD, Quenched, Vacancies, Annealing
- ANNEALING, Vacancies, Quenched silver.** See SILVER, Quenched, Vacancies, Annealing
- ANNEALING, Vacuum, Copper wires.** See WIRES, Copper, Annealing, Vacuum
- ANNEALING RANGE, Thermal expansion, Borosilicate glass, Seals.** See SEALS, Glass, Borosilicate, Thermal expansion, Annealing range
- ANNULAR DISC ELECTRICAL CONDUCTORS.** See CONDUCTORS, Electrical, Disc, Annular
- ANNULAR FLOW, Air-Water.** See AIR-WATER, Flow, Annular
- ANNULAR FLOW, Gas-liquid systems.** See GAS-LIQUID SYSTEMS, Flow, Annular
- ANNULAR FLOW, Steam-water.** See STEAM-WATER, Flow, Annular
- ANNULAR JET HOVERCRAFT.** See HOVERCRAFT, Jet, Annular
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- ARGON**, Shielding, Arc welding, Steel-Nickel, Cryogenics equipment. See **CRYOGENICS**, Equipment, Steel-Nickel, Welding, Arc, Argon shielded
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- ARICA**  
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- AROMATIC AMINES**, Reaction with formaldehyde. See **FORMALDEHYDE**, Reaction with amines, Aromatic
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- ARRAYS**, Aerials. See **AERIALS**, Arrays
- ARRAYS**, Aerials, Radar. See **RADAR**, Aerials, Arrays
- ARRAYS**, Aerials, Transmitters, H.F. radio. See **RADIO**, H.F., Transmitters, Aerials, Arrays
- ARRAYS**, Aerials, U.H.F. radio. See **RADIO**, U.H.F., Aerials, Arrays
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**ASH,** Brown coal fired gas turbines. See GAS TURBINES, Brown coal fired, Ash

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**ASHING,** Organic materials. See ORGANIC MATERIALS, Ashing

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FERTILISERS, Spreading, Aircraft, Asia  
TECHNOLOGY, Asia

**ASKARELS,** Transformers. See TRANSFORMERS, Askarel

**ASPHALT**

Related Headings:

ASPHALTENES

**ASPHALT,** Dressing, Roadways, Bridges. See BRIDGES, Roadways, Dressing, Asphalt

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**ASSEMBLY, Power presses.** See **PRESSES, Power, Assembly**

**ASSEMBLY, Watches.** See **WATCHES, Assembly**

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**SATELLITES, Artificial**

**TELESCOPES**

**ASTRONAUTICS—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

*Terminology*

*Education*

*Research*

*Laboratories*

*Vehicles*

*Transporters*

*Flights*

*Uses*

*Military*

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**ASWAN**

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Nature, 203 (4 Jul 64) p.25

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AUTOCODES, Programs, Computers, Simulators. See COMPUTERS, Simulators, Programs, Autocodes

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GIBBERELLINS

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BELT CONVEYORS, Loading, Bags, Basic slag. See BASIC SLAG, Bags, Loading, Conveyors, Belt

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**BENDING**

Related Headings:

STRAIGHTENING

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BENDING, Anisotropic composite plates. See PLATES, Composite, Anisotropic, Bending

BENDING, Axisymmetrically loaded cylindrical shells. See SHELLS, Cylindrical, Axisymmetrically loaded, Bending

BENDING, Beams. See BEAMS, Bending

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BENDING, Castellated beams. See BEAMS, Castellated, Bending

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BENDING, Composite bars. See BARS, Composite materials, Bending

BENDING, Concrete, Tee beams. See BEAMS, Tee, Concrete, Bending

BENDING, Continuous casting, Steel. See STEEL, Casting, Continuous, Bending

BENDING, Creep, Cylindrical shells. See SHELLS, Cylindrical, Creep, Bending

BENDING, Creep, Rectangular plates. See PLATES, Rectangular, Creep, Bending

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BENDING, Paper board. See BOARD, Paper, Bending

BENDING, Pipes. See PIPES, Bending

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- BENDING**, Steel, I-section beams. See **BEAMS**, I-section, Steel, Bending
- BENDING**, Steel rod, Baskets. See **BASKETS**, Rods, Steel, Bending
- BENDING**, Stiffness, Fabrics. See **FABRICS**, Stiffness (Bending)
- BENDING**, Unbonded prestressed concrete, Beams. See **BEAMS**, Concrete, Prestressed, Unbonded, Bending
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**BIOLOGICAL INSTRUMENTS**

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FLATS, Prefabrication, Bison wall frame system

BISULPHITE IONS, Distribution, Additives, Air drying, Potatoes. See POTATOES, Drying (Air) Additives, Bisulphite ion distribution

BISULPHITES, Aminosugars. See AMINOSUGARS, Bisulphites

BISULPHITES, Determination, Woollen fabrics. See FABRICS, Woollen, Determination of bisulphites

BITS, Drilling. See DRILLING, Bits

BITTER FRACTIONS, Stored hops. See HOPS, Stored, Bitter fractions

BITTER TECHNIQUE, Magnetic domain studies, Gadolinium. See GADOLINIUM, Magnetic domains, Studies, Bitter technique

**BITUMEN**

Asphalt, bitumen and l.p. gases. D. Wilson. Fuel Efficiency, 12 (Oct 64) p.18-20. il.

**BITUMEN**

Related Headings:

ASPHALT

TAR

BITUMEN, Coatings, Soil, Corrosion, Aluminium alloys. See ALUMINIUM, Alloys, Corrosion, Soil, Coatings, Bitumen

**BITUMEN, Emulsion**

Southern centre discusses uses of bitumen emulsion: abstract of "Special uses of bitumen emulsion". E. R. Hatt. Municipal Engng., 141 (15 May 64) p.906-7

BITUMEN, Flat roofs. See ROOFS, Flat, Bitumen

**BITUMEN, Oxidation, Photochemical**

Influence of radiant energy on bitumen oxidation. K. G. Martin. J. of Applied Chemistry, 14 (Nov 64) p.514-24. il. refs.

BITUMEN, Roofing. See ROOFING, Bitumen

BITUMEN, Rubberised, Dressing, Roadways, Suspension bridges. See BRIDGES, Suspension, Roadways, Dressing, Bitumen, Rubberised

**BITUMEN, Storage, Tanks, Heating, Oil-fired**

Indirect heating for bitumen storage. D. C. Roots. Chemical Processing, 10 (Sep 64) p.6-9. il.

BITUMEN, Surface dressing, Roads. See ROADS, Surfaces, Dressing, Bitumen

BITUMEN SEALED CONCRETE. See CONCRETE, Bitumen sealed

BITUMINOUS COAL. See COAL, Bituminous

BLACK, Colour separations, Half-tone illustrations. See

ILLUSTRATIONS, Half-tone, Colour separations, Black

BLACK LEVEL, Television. See TELEVISION, Black level

BLACK NICKEL ELECTROPLATING. See ELECTROPLATING, Nickel, Black

**BLACKBURN**

See

MARKETS, Buildings, Blackburn

TELEPHONY, Automatic, Exchanges, Blackburn

BLACKCURRANTS, Determination of ascorbic acid, Mercuric acid, Reduction

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BLACKENING, Metals. See METALS, Blackening

BLACKENING, Steel. See STEEL, Blackening

**BLACKPOOL**

See

STREETS, Lighting, Blackpool

TRAMCARS, Blackpool

BLADE COATING, Paper. See PAPER, Coatings, Blade

BLADES (Bulldozers) Frames, Steel, Welding, Speed, Control systems, Electro-hydraulic

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Vibrations of pre-twisted cantilever blading allowing for rotary inertia and shear deflection. W. Carnegie. J. of Mechanical Engng. Science, 6 (Jun 64) p.105-9. refs.

BLADES, Cantilever, Vibrations

Natural frequencies of unshrouded cantilever blades. P. Baur. Engineer, 218 (30 Oct 64) p.701-6. il. refs.

BLADES, Circular saws. See SAWS, Circular, Blades

BLADES, Compressors, Turbojets, Bomber aircraft. See BOMBER AIRCRAFT, Turbojets, Compressors, Blades

BLADES, Gas turbines, Aircraft. See AIRCRAFT, Gas turbines, Blades

BLADES, Propellers, Ships. See SHIPS, Propellers, Blades

BLADES, Rotors, Gas turbines, Aircraft. See AIRCRAFT, Gas turbines, Rotors, Blades

BLADES, Rotors, Helicopters. See HELICOPTERS, Rotors, Blades

BLADES, Steam turbines. See STEAM, Turbines, Blades

BLADES, Steam turbines, Turbo-alternators. See TURBO-ALTERNATORS, Steam turbines, Blades

BLADES, Steel, Steam turbines. See STEAM, Turbines, Blades, Steel

BLADES, Turbines, Water. See WATER, Turbines, Blades



BLAES, Bricks manufactures. See BRICKS, Manufactures,

Blaes

BLAGDON

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FURTHER EDUCATION STAFF COLLEGE, Blagdon

**BLAND, L.**

Lilian Bland and the Mayfly. P. Lewis. Flight, 85 (23 Jan 64) p.140-1. il.

BLANKET FEEDING, Laminating, Fabrics. See FABRICS, Laminating, Blanket feeding

**BLANKETS, Electric, Buyers' guides**

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**BLANKETS, Polypropylene**

Polypropylene fibre blankets: construction and finishing. Textile Manufacturer, 90 (Nov 64) p.475-6

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Tufting for the bedroom. Man-Made Textiles, 41 (Jul 64) p.53+. il.

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Crack formation in blanking and piercing. C. F. Noble & P. L. B. Oxley. International J. of Production Research, 2 (Dec 63) p.265-74: il. refs.

**BLANKING, Dies, Stops, Hook**

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Fine-blanking: a technique in use at the Croydon works of I.C.T. Ltd. J. F. Hedges. Sheet Metal Industries, 41 (Jan 64) p.24-8. il.

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**BLANKING, Fine, Presses, Hydraulic**

Hydrina type HFP 63 fine blanking press. Machinery, 104 (4 Mar 64) p.540-1. il.

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BLANKING, Rubber sheets. See SHEETS, Rubber, Blanking

BLANKS, Gears, Tractors. See TRACTORS, Gears, Blanks

BLANKS, Worm gears. See GEARS, Worm, Blanks

BLAST FURNACE SLAG, Cement. See CEMENT, Blast furnace slag

BLAST FURNACES. See FURNACES, Blast

BLAST FURNACES, Lead production. See LEAD, Production, Blast furnaces

BLAST FURNACES, Platinum production. See PLATINUM, Production, Furnaces, Blast

BLAST FURNACES, Slags, Roads. See ROADS, Blast furnace slags

BLAST WAVES, Underwater explosions. See EXPLOSIONS, Underwater, Pressure waves

BLASTING, Ammonium nitrate-fuel oil. See AMMONIUM NITRATE-FUEL OIL, Blasting

BLASTING, Coal mining. See COAL, Mining, Blasting

BLASTING, Coal mining. See COAL, Mining, Explosives

BLASTING, Improvements, Beaches. See BEACHES, Improvements, Blasting

BLASTING, Mining. See MINING, Blasting

BLASTING, Quarrying. See QUARRYING, Blasting

BLASTING, Roads. See ROADS, Blasting

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**BLEACHING**

Related Headings:

N.CHLORO COMPOUNDS, Bleaching

BLEACHING, Cellulosic fabrics. See FABRICS, Cellulosic, Bleaching

BLEACHING, Colour centres, Silica-Soda glass. See

GLASS, Silica-Soda, Colour centres, Bleaching

BLEACHING, Cotton. See COTTON, Bleaching

BLEACHING, Cotton, Fabrics. See FABRICS, Cotton, Bleaching

BLEACHING, Cotton, Household textiles. See HOUSEHOLD TEXTILES, Cotton, Bleaching

BLEACHING, Nylon, Fabrics. See FABRICS, Nylon, Bleaching

BLEACHING, Pulp production. See PULP, Production, Bleaching

BLEACHING, Wool. See WOOL, Bleaching

BLEACHING, Woollen fabrics. See FABRICS, Woollen, Bleaching

BLENDED FABRICS. See FABRICS, Blended

BLENDED MAN-MAN FIBRES, Fabrics. See FABRICS, Man-made fibres, Blended

BLENDING. See MIXING

BLENDING, Coal. See COAL, Blending

BLENDING, Malt. See MALT, Blending

BLENDING, Petrol. See PETROL, Blending

BLENDING, Woollen yarns. See YARNS, Woollen, Blending

BLENDING, Worsted fabrics. See FABRICS, Worsted, Blending

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See TOWN PLANNING, Bletchley

**BLIND PEOPLE, Ultrasonic guidance aids**

Ultrasonic sensing probe as a mobility aid for the blind. L.

Kay. Ultrasonics, 2 (Apr/Jun 64) p.53-9. il. refs.

BLIND SCHOOLS. See SCHOOLS, Blind

BLISTERING, Paint. See PAINT, Blistering

BLOCK RELEASE, Technical education. See TECHNICAL EDUCATION, Block release

BLOCKING, Seamless, Backs, Uppers, Footwear. See FOOTWEAR, Uppers, Backs, Blocking, Seamless

BLOCKING OSCILLATORS. See OSCILLATORS, Blocking

BLOCKING OSCILLATORS, Heart stimulators. See HEART, Stimulators, Oscillators, Blocking

BLOCKS, Aluminium, Engines, Motor cars. See MOTOR CARS, Engines, Blocks, Aluminium

BLOCKS, Aluminium, Internal combustion engines. See ENGINES (Internal combustion) Cylinder blocks, Aluminium

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**BLOCKS, Concrete, Aerated**

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**BLOCKS (Diesel engines) Machining**

Birth of the NC production line [International Harvester] Metalworking Production, 108 (4 Nov 64) p.66-9. il.

**BLOCKS (Diesel engines) Machining, Transfer machines**

"Point automation" aids production of diesels at the Scania-Vabis plant. D. Scott. *Machine Shop*, 25 (Sep 64) p.428-32. il.

**BLOCKS, Engines, Motor cars.** See **MOTOR CARS, Engines, Blocks**

**BLOCKS, Engines, Motor vehicles.** See **MOTOR VEHICLES, Engines, Cylinders, Blocks**

**BLOCKS, Hollow, Ceramics, Manufactures**

New hollow block plant at Wienerberger brickworks. Claycraft, 37 (Jan 64) p.154-5. il.

**BLOCKS, Measuring.** See **MEASURING BLOCKS**

**BLOCKS, V-, Marking, Axes, Shafts.** See **SHAFTS, Axes, Marking, V-blocks**

**BLOOMS, Iron, Roman**

Roman bloom from Cranbrook, Kent. G. T. Brown. *J. of Iron & Steel Inst.*, 202 (Jun 64) p.502-4. il. refs.

**BLOOMS, Steel, Weighing, Machines**

Automatic weighing cuts handling at steel works. Metalworking Production, 108 (1 Apr 64) p.49-50. il.

Automatic weighing of ingots and blooms at Tinsley Park. *Steel Times*, 188 (27 Mar 64) p.406-7. il.

Steel cut-up dimensions—from weight [English Steel Corporation, Tinsley Park works] *Measurement & Control*, 3 (Mar 64) p.84-6. il.

Weighing ingots and billets: automatic weighing machines in use at Tinsley Park Works. *Metal Industry*, 104 (12 Mar 64) p.352-3. il.

**BLOW EXTRUDERS, Thermoplastics, Film, Tubes.** See **TUBES, Film, Thermoplastics, Extruders, Blow**

**BLOW MOULDED P.V.C. BOTTLES.** See **BOTTLES, P.V.C., Blow moulded**

**BLOW MOULDED POLYTHENE, Linings, Containers, Liquids.** See **LIQUIDS, Containers, Linings, Polythene, Blow moulded**

**BLOW MOULDED POLYTHENE CONTAINERS.** See **CONTAINERS, Polythene, Blow moulded**

**BLOW MOULDING, Polythene film.** See **FILM, Polythene, Moulding, Blow**

**BLOW MOULDING, Seam-free thermoplastic containers.** See **CONTAINERS, Thermoplastic, Seam-free, Moulding, Blow**

**BLOW MOULDING, Thermoplastics.** See **THERMOPLASTICS, Moulding, Blow**

**BLOW MOULDING, Thermoplastics, Bottles.** See **BOTTLES, Thermoplastics, Blow mouldings**

**BLOW MOULDING, Thermoplastics, Containers.** See **CONTAINERS, Thermoplastics, Moulding, Blow**

**BLOWDOWN, Boilers.** See **BOILERS, Blowdown**

**BLOWING AGENTS, Clay, Lightweight aggregate concrete.** See **CONCRETE, Lightweight aggregate, Clay, Blowing agents**

**BLOWING AGENTS, Thermal insulants, Expanded polyurethane.** See **POLYURETHANE, Expanded, Thermal insulants, Blowing agents**

**BLOWING-IN, Blast furnaces.** See **FURNACES, Blast, Blowing-in**

**BLOWING MACHINES**

Related Headings:  
BELLOWS

**BLUE BRICKS.** See **BRICKS, Blue**

**BLUE GAS.** See **WATER GAS**

**BLUE SLATE.** See **SLATE, Blue**

**BLUE WATER GAS.** See **WATER GAS**

**BLUEBIRD HIGHWAYMAN CARAVANS.** See **MOTOR CARAVANS, Types, Bluebird Highwayman**

**BLUEBIRD WAYFARER MOTOR CARAVANS.** See **MOTOR CARAVANS, Types, Bluebird Wayfarer**

**BLUNT BODIES, Flow, Supersonic, Base pressure, Determination, Turbulent shear layer, Re-attachment**

Turbulent shear layer re-attachment with special emphasis on the base pressure problem. H. McDonald. *Aeronautical Q.*, 15 (Aug 64) p.247-80. il. refs.

**BLUNT TRAILING EDGES, Aerofoils.** See **AEROFOILS, Edges, Trailing, Blunt**

**BLYTH SYSTEM, Prefabrication, Housing.** See **HOUSING, Prefabrication, Blyth system**

**BOARD, Paper, Bending, Strength, Testing, Instruments**

Bending strength tester for semi-rigid sheet materials. C. F. Sharman. *Paper Technology*, 5 (Jun 64) p.259+. il.

**BOARD, Paper, Corrugated, Containers.** See **CONTAINERS, Board, Corrugated**

**BOARD, Paper, Corrugated, Manufactures, Machines**

Langston-Masson corrugator for Enso-Gutzeit. *World's Paper Trade Rev.*, 162 (16 Jul 64) p.173+. il.

**BOARD, Paper, Guillotines**

Winders and cutters for paper and board mills. H. R. W. Marsh. *Paper Technology*, 4 (Dec 63) p.593-600. il.

**BOARD, Paper, Manufactures**

No.11 board mill at Purfleet. *Engineer*, 217 (27 Mar 64) p.547-9. il.

**BOARD, Paper, Manufactures, Factories**

Thames Board Mills latest project: £5,000,000 pulp and board mill at Workington. *Packaging*, 35 (Oct 64) p.70-1. il.

Thames plan £5 million integrated mill at Workington. J. S. Curtis. *World's Paper Trade Rev.*, 162 (20 Aug 64) p.554+. il.

**BOARD, Paper, Manufactures, Machines**

Ilggesunds report on coating of Inverform-produced solid bleached board. *World's Paper Trade Rev.*, 162 (5 Nov 64) p.1436+. il.

TBM's Inverform machine—a major expansion of Britain's board production. *Paper & Print*, 36 (Winter 63) p.399+. il.

Thames Board Mill's new machine. *Paper Maker*, 147 (Apr 64) p.68-9. il.

Thames Board Mills 'No.11' machine now on stream [Inverform machine] *World's Paper Trade Rev.*, 161 (19 Mar 64) p.907+. il.

Thames Board Mills £6¼ million Inverform board-making machine. *Packaging*, 35 (Apr 64) p.50-3. il.

**BOARD, Paper, Reels, Winders**

Winders and cutters for paper and board mills. H. R. W. Marsh. *Paper Technology*, 4 (Dec 63) p.593-600. il.

**BOARD, Paper, Stiffness, Testing, Equipment**

Kenley stiffness tester. J. W. Scott & M. J. Carpenter. *What We Are Doing* (Jun 64) p.28-41. il. refs.

**BOARD ROOMS, Interior decoration**

Board-room, Millbank. *Architectural Rev.*, 135 (Apr 64) p.267-9. il.

**BOARDING, Nylon stockings.** See **STOCKINGS, Nylon, Boarding**

**BOARDS, Wood, Floors.** See **FLOORS, Boards, Wood**

**BOATS**

Related Headings:

CUTTERS, Boats

SLEDS, Sea

**BOATS—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

**Technical operations**

*Building*  
*Laying up*  
*Navigation*

**Materials**

*Aluminium alloys*  
*Plywood*  
*Polymers*  
*Reinforced plastics*  
*Polyester-Glass fibre*

**Components**

*Panels*  
*Decks*  
*Sails*  
*Radio equipment*  
*Domestic equipment*  
*Furnishings*

**Kinds of boats**

*Motor*  
*Steam*  
*Catamaran*

**BOATS, Aluminium alloys**

Some aspects of the use of aluminium alloy in boatbuilding, pt.7: aluminium boats in the U.S.A. and Europe. *Ship & Boat Builder*, 17 (Apr 64) p.57+. il.

Some aspects of the use of aluminium alloys in boatbuilding, pt.8: masts, spars & fittings. *Ship & Boat Builder*, 17 (May 64) p.34-6. il.

**BOATS, Aluminium alloys, Welding**

Some aspects of the use of aluminium alloy in boatbuilding, pt.4: techniques of welding. *Ship & Boat Builder*, 17 (Jan 64) p.69-71. il.

**BOATS, Building**

Four generations of boatbuilding [John I. Thornycroft and Co. Ltd.]. *Motor Boat*, 100 (26 Jun 64) p.22-5. il.

One boat per fortnight [Whittingham & Mitchel Ltd.]. *Ship & Boat Builder*, 17 (May 64) p.39-41. il.

**BOATS, Catamaran, Motor**

Boats in perspective: unusual catamaran motor sailer.

*Motor Boat*, 101 (4 Sep 64) p.17-20. il.

Twin hulled motor sailer. *Motor Boat*, 101 (11 Dec 64) p.36. il.

**BOATS, Decks, Equipment**

Looking at the deck equipment: anchors, winches and warps. *Motor Boat*, 100 (1 May 64) p.58-60. il.

Looking at the deck equipment: cleats fairleads, stanchions and ventilators. *Motor Boat*, 100 (1 May 64) p.61-2. il.

**BOATS, Domestic equipment, Laying-up**

Laying-up & winter work—domestic-wise. H. Wickham.

*Motor Boat*, 99 (13 Dec 63) p.37-8. il.

**BOATS, Fishing. See FISHING, Vessels****BOATS, Furnishings, Laying-up**

Laying-up & winter work—domestic-wise. H. Wickham.

*Motor Boat*, 99 (13 Dec 63) p.37-8. il.

**BOATS, Laying up, Boat yards**

Laying-up in a yard. *Motor Boat*, 101 (18 Sep 64) p.17-19. il.

**BOATS, Motor**

Boats in perspective, no.2: Hipperson-built four berth.

*Motor Boat*, 100 (17 Apr 64) p.49-50. il.

Evolution of 007. *Motor Boat*, 101 (13 Nov 64) p.34-5. il.

For trans-Atlantic motor boat race. *Motor Boat*, 101 (4 Sep 64) p.21-3. il.

Freemanship. R. Holliday. *Motor Boat*, 101 (4 Sep 64) p.40-2. il.

Italian craft in the channel. *Motor Boat*, 100 (3 Apr 64) p.54-5. il.

Introducing the Fairey Marine "Swordsmen 33". Shipbuilding & Shipping Record, 103 (30 Jan 64) p.156-7. il.

Latest Levi 16. *Motor Boat*, 101 (2 Oct 64) p.36-7. il.

Luxury with speed [Rapier 4600 class] *Motor Boat*, 100 (17 Apr 64) p.56-7. il.

Matador 31-knot two berth cruiser. *Motor Boat*, 101 (30 Oct 64) p.26-8. il.

New power in old bottles. C. Mudie. *Motor Boat*, 99 (27 Dec 63) p.144-6. il.

100 miles in the hour record bid. N. Buckley. *Motor Boat*, 101 (21 Aug 64) p.30-1. il.

Power boat extraordinary. *Motor Boat*, 101 (7 Aug 64) p.17-20. il.

Power boats on the Bure river. *Motor Boat*, 100 (1 May 64) p.56-7. il.

Shell go well. *Motor Boat*, 100 (24 Jan 64) p.39-41. il.

Two new boats: that stateside look and the newcomer from Spain. *Motor Boat*, 100 (15 May 64) p.54-5. il.

What have sixty years taught us? J. Teale. *Motor Boat*, 101 (10 Jul 64) p.56-9. il.

**BOATS, Motor, Aluminium alloys**

Some aspects of the use of aluminium alloy in boatbuilding, pt.6: construction of alloy pleasure craft. *Ship & Boat Builder*, 17 (Mar 64) p.53-5. il.

**BOATS, Motor, Aluminium alloys, Maintenance**

Some aspects of the use of aluminium alloy in boatbuilding, pt.9: care and maintenance. *Ship & Boat Builder*, 17 (Jun 64) p.43-5

**BOATS, Motor, Anchorages, Thames Estuary**

Thames estuary: some of the ports and anchorages. M. J. Rantzen. *Motor Boat*, 101 (4 Sep 64) p.24-7. il.

**BOATS, Motor, Diesel engines**

Bergius-Kelvin series R. *Motor Boat*, 99 (27 Dec 63) p.132-3. il.

Diesel powered Volvo outdrives. *Motor Boat*, 101 (24 Jul 64) p.20-2. il.

Inboard-outboard work units [Schottel] *Ship & Boat Builder*, 17 (Aug 64) p.62-3. il.

Latest addition to Swedish range [Albin AD-2] Oil Engine & Gas Turbine, 31 (Mar 64) p.31. il.

Notable V8 diesel from America [300 h.p. oversquare Cummins] F. Snoxell. *Motor Boat*, 100 (15 May 64) p.66-7. il.

Perkins HT6,354(M) diesel. F. Snoxell. *Motor Boat*, 100 (3 Apr 64) p.50-3. il.

Glenifer DHV8 diesel. F. Snoxell. *Motor Boat*, 100 (29 May 64) p.26-9. il.

250 h.p. Cummins marine diesel engine. *Ship & Boat Builder*, 17 (Mar 64) p.62+. il.

**BOATS, Motor, Diesel engines, Outboard**

Standard power packs in three main sizes. [Harbormaster]. *Ship & Boat Builder*, 17 (Aug 64) p.63-4. il.

**BOATS, Motor, Engines**

- Choice of an engine. J. Teale. *Motor Boat*, 100 (7 Feb 64) p.38-40. il.
- Engine development from the outset. F. Snoxell. *Motor Boat*, 101 (10 Jul 64) p.60-3. il.
- Mangoletsi 90 out-drive set. F. Snoxell. *Motor Boat*, 101 (16 Oct 64) p.20-2. il.
- Newage/B.M.C. Sea Prince 3000. F. Snoxell. *Motor Boat*, 101 (21 Aug 64) p.22-5. il.
- Rolls-Royce 240 h.p. petrol engine. *Ship & Boat Builder*, 17 (Apr 64) p.52-4. il.
- Silence is golden. F. Snoxell. *Motor Boat*, 101 (2 Oct 64) p.25-7. il.
- Your engine—repair or renew? F. Snoxell. *Motor Boat*, 101 (30 Oct 64) p.18-21. il.

**BOATS, Motor, Engines, Buyers' guides**

- Buyers' guide: outboards, outdrives, jets. *Motor Boat*, 100 (7 Feb 64) p.77+
- Buyers' guide: outdrives & jets. *Motor Boat*, 100 (21 Feb 64) p.59+

**BOATS, Motor, Engines, Maintenance**

- Keep the power punching. *Motor Boat*, 100 (6 Mar 64) p.102+. il.

**BOATS, Motor, Engines, Turbochargers**

- Daytona Turbo 400. F. Snoxell. *Motor Boat*, 101 (27 Nov 64) p.42-5. il.

**BOATS, Motor, Fires, Prevention**

- Fire and explosions afloat. *Motor Boat*, 101 (13 Nov 64) p.31-2. il.

**BOATS, Motor, Galleys, Equipment**

- Living aboard: equipment for the galley. *Motor Boat*, 100 (15 May 64) p.56-8. il.

**BOATS, Motor, Gas turbines**

- Gas turbines for unconventional craft, pt.2. G. L. Graves & R. S. Carleton. *Hovering Craft & Hydrofoil*, 3 (Nov/Dec 63) p.27-9. il. refs.
- 320 h.p. Kelvin turbo-charged engine. *Ship & Boat Builder*, 17 (Feb 64) p.54-6. il.
- Power units in perspective, no.1: Rover gas turbine, type 2S/150. F. Snoxell. *Motor Boat*, 100 (21 Feb 64) p.22-5. il.

**BOATS, Motor, Gears**

- Transmitting the power, pt.1: basic requirements. E. L. D. Morgan. *Motor Boat*, 100 (6 Mar 64) p.115-16. il.

**BOATS, Motor, Handling**

- Boat handling for the novice, pt.1: basics. T. Sex. *Motor Boat*, 99 (27 Dec 63) p.136-8. il.
- Boat handling for the novice, pt.2: basic manoeuvres. *Motor Boat*, 100 (10 Jan 64) p.80-1. il.

**BOATS, Motor, Handling, Tidal water, Mooring**

- Boat handling for the novice, pt.3. T. Sex. *Motor Boat*, 100 (7 Feb 64) p.59-61. il.
- Boat handling for the novice, pt.4. T. Sex. *Motor Boat*, 100 (21 Feb 64) p.48-9. il.
- Boat handling for the novice, pt.5. T. Sex. *Motor Boat*, 100 (6 Mar 64) p.130-1. il.

**BOATS, Motor, Hulls, Maintenance**

- Hull care, pt.1. J. Teale. *Motor Boat*, 100 (6 Mar 64) p.85-8. il.
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#### **BOILERS—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

##### *Insurance*

##### **Problems**

*Safety*  
*Noise*  
*Corrosion*  
*Flue dust*  
*Blowdown*  
*Heat loss*

##### **Properties**

*Steam conditions*

##### **Technical operations**

*Manufactures*  
*Maintenance*  
*Firing*  
*Cleaning*  
*Soot blowing*

##### **Operating materials**

*Fuels*  
*Coal*  
*Feedwater*  
*Condensate*

##### **Constructional materials**

*Steel*  
*Thermal insulation*  
*Refractories*

##### **Parts & Ancillaries**

*Casings*  
*Tubes*  
*Furnaces*  
*Grit arrestors*  
*Control systems*  
*Plant*  
*Economisers*  
*Instruments*  
*Steam pressure gauges*

##### **Kinds by fuel**

*Solid fuel fired*  
*Coal fired*  
*Wood waste fired*  
*Oil fired*  
*Solar energy*

#### **BOILERS—SUBHEADINGS—Synopsis—cont.**

##### **Kinds by structure**

*Packaged*  
*Mobile*  
*Fire tube*  
*Economic*  
*Lancashire*  
*Water tube*

##### **Kinds by mode of working**

*Flash*  
*Thermal storage*

##### **Applications**

*Power stations*  
*Ships*  
*Dyehouses*  
*Laundries*

**BOILERS, Anti-missile destroyers.** See **DESTROYERS, Anti-missile, Boilers**

**BOILERS, Bagasse-fired, Sugar production.** See **SUGAR, Production, Boilers, Bagasse-fired**

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Automatic intermittent blowdown system. *Power & Works Engr.*, 59 (Jul 64) p.20-1. il.

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**BOILERS, Oil-fired, Heating, Houses.** See HOUSES, Heating, Boilers, Oil-fired

**BOILERS, Oil-fired, Heating, Tall buildings.** See BUILDINGS, Tall, Heating, Boilers, Oil-fired

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**BRICKS**

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**BRIDGES**

## Related Headings:

DRAWBRIDGES  
FLYOVERS  
ROADS, Elevated  
VIADUCTS

**BRIDGES—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

## Particular localities

*West Germany*

## Research

## Problems

*Failure*

## Technical operations

*Maintenance*

*Lighting*

## Materials

*Composite construction*

*Concrete*

*Steel*

*Wood*

## Components

*Girders*

*Decks*

*Bearings*

*Hinges*

*Roadways*

*Walls*

*Railings*

## Kinds of bridge by form

*Arch*

*Continuous*

*Skew*

*Inclined leg*

*Suspension*

*Glass curtained*

*Vertical lift*

*Rolling lift*

## Kinds of bridge by function

*Motorways*

*Packhorse*

*Foot*

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**BRUSHING**, Knitted fabrics. See FABRICS, Knitted, Raising

**BRUSHLESS ALTERNATORS**. See ALTERNATORS, Brushless

**BRUSHLESS D.C. TACHOMETERS**. See TACHOMETERS, D.C., Brushless

**BRUSHLESS SYNCHRONOUS MOTORS**. See ELECTRIC MOTORS, Synchronous, Brushless

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**BUCKET CONVEYORS, Unloading, Barges, Coal.** See **COAL, Barges, Unloading, Bucket wheels**

**BUCKINGHAM**

See

**CIVIC CENTRES, Buckingham**

**BUCKLING, Curved panels.** See **PANELS, Curved, Buckling**

**BUCKLING, Cylindrical shells.** See **SHELLS, Cylindrical, Buckling**

**BUCKLING, Metal bellows, Joints, Pipes.** See **PIPES, Joints, Bellows, Metal, Buckling**

**BUCKLING, Neutron distribution, Plutonium, Fuels, Nuclear reactors.** See **NUCLEAR REACTORS, Fuels, Plutonium, Buckling**

**BUCKLING, Orthotropic conical shells.** See **SHELLS, Conical, Orthotropic, Buckling**

**BUCKLING, Rectangular plates.** See **PLATES, Rectangular, Buckling**

**BUCKLING, Spars, Wings, Supersonic aircraft.** See **AIRCRAFT, Supersonic, Wings, Spars, Buckling**

**BUCKLING, Steel, Rods.** See **RODS, Steel, Buckling**

**BUCKLING, Stiffened plates.** See **PLATES, Stiffened, Buckling**

**BUCKLING, Stiffeners, Web plates, Girders.** See **GIRDERS, Plates, Web, Stiffeners, Buckling**

**BUCKLING, Thin walled square tubes.** See **TUBES, Square, Thin walled, Buckling**

**BUCKSTAYS, Ovens, Coke.** See **COKE, Ovens, Buckstays**

**BUENOS AIRES**

See

**POWER STATIONS, Buenos Aires**

**BUFFALO MILITARY TRANSPORT AIRCRAFT.** See **AIRCRAFT, Military, Transport, Types, De Havilland Canada DHC-5 Buffalo**

**BUFFALO MILK.** See **MILK, Buffalo**

**BUFFER STORAGE UNITS, Radio links, Telex.** See **TELEX, Radio links, Storage units, Buffer**

**BUFFERS, Wagons, Railways.** See **RAILWAYS, Wagons, Buffers**

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**BUILDING**

Related Headings:

**ACRYLIC PLASTICS, Building materials**

**ADHESIVES, Building materials**

**ADHESIVES, Rubber, Building materials**

**AIR CONDITIONING**

**ALUMINIUM, Alloys, Building materials**

**ALUMINIUM, Building materials**

**ARCHITECTURE**

**ASBESTOS CEMENT, Building materials**

**BUILDING**

Related Headings—cont.

**BATHROOMS**

**BRICKLAYING**

**BRICKS, Building materials**

**CEILINGS**

**CERAMICS, Building materials**

**CLOAKROOMS**

**CONCRETE, Building materials**

**CONCRETE (Capstone aggregate) Building materials**

**CONCRETING**

**COPPER, Building materials**

**DAMP-PROOFING**

**DINING HALLS**

**DOORS**

**FLOORS**

**GLASS, Building materials**

**GRANITE, Building materials**

**HOUSING, Building materials**

**JOINERY**

**KITCHENS**

**LAVATORIES**

**LEAD, Building materials**

**MASONRY**

**METALS, Building materials**

**MODULAR CO-ORDINATION**

**NICKEL SILVER, Building materials**

**P.V.A., Dispersions, Building materials**

**P.V.C., Building materials**

**PARTITIONS**

**PHENOL FORMALDEHYDE, Expanded, Building materials**

**PLASTER**

**PLASTERING**

**PLASTICS, Building materials**

**PLASTICS, Expanded, Building materials**

**PLASTICS, Reinforced, Building materials**

**PLASTICS, Reinforced-Glass fibre, Building materials**

**PLUMBING**

**POLYSTYRENE, Expanded, Building materials**

**QUANTITY SURVEYING**

**READING ROOMS**

**RECREATION CENTRES, Building materials**

**ROOFLIGHTS**

**ROOFS**

**RUBBER, Building materials**

**RUBBER, Synthetic, Building materials**

**SCAFFOLDING**

**SEALANTS, Rubberised, Building materials**

**SLATE**

**STAIRCASES**

**STEEL, Coated, Plastics, Building materials**

**STEEL, Stainless, Building materials**

**STONE, Portland**

**STONWORK**

**STRUCTURES**

**STUDIES, Rooms**

**STUDY-BEDROOMS**

**VENTILATION**

**VENTILATORS**

**WINDOWS**

**WOOD, Building materials**

**WOOD, Reinforced, Steel, Building materials**

**ZINC, Building materials**

**BUILDING—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

## Special localities

Great Britain  
Coventry  
Scotland  
Netherlands

## Documents

Controls  
Regulations

## Costs

Contracts  
*Forms of contract*

## Consortia

## Technicians

## Education

Apprenticeship  
Research  
*Environmental research*  
Information services  
Classification systems

## Problems

*Industrial safety*  
*Accidents*

## Sites

Materials  
StoneEquipment  
Computers  
Pumps

## Technical operations

*Critical path analysis*  
*Mechanisation*  
*Production, Management*  
*Supervision*

*Inspection**Communications*Building under special conditions  
*Winter***BUILDING, Accidents, Insurance**

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**BUILDINGS—SUBHEADINGS—Synopsis—cont.****Kinds**

*Temporary*

*Tall*

*Round*

*Wood*

*Composite construction*

*Concrete*

*Porous materials*

*Prefabricated*

*Suspension construction*

*Framed*

*Earthquake resistant*

*Fungi infested*

*Overhead*

*Riparian*

**BUILDINGS—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following*

**Problems**

*Fires*

*Pests*

*Dampness*

*Condensation*

*Town planning*

**Properties**

*Acoustics*

*Heat transfer*

**Technical activities**

*Measurement*

*Maintenance*

*Preservation*

*Cleaning*

*Insulation*

*Coating*

*Limewash*

*Painting*

*Paint*

*Interior design*

**Parts**

*Frames*

*Panels*

*Girders*

*Sheets*

*Foundations*

*Steelwork*

*Walls*

*Cladding*

*Grilleworks*

*Partitions*

*Linings*

*Basements*

*Fittings*

*Steps*

*Vibration isolators*

**Services**

*Engineering services*

*Heating*

*Lighting*

*Floodlighting*

*Security installations*

*Communication equipment*

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**BUILDINGS, Heating**

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FIREPLACES  
RADIATORS  
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- BULGE TESTS**, Explosion, Welded steel, Plates. See PLATES, Steel, Welded, Explosion bulge tests
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- BULKED YARNS**, Particular materials. See TEXTURED followed by name of material
- BULKHEADS (Ships) Materials, Fire resistant**  
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Walsall's 28ft-long Fleetlines. Bus & Coach, 36 (May 64) p.171-2. il.

#### BUSES—SUBHEADINGS—Synopsis

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

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##### Properties

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##### Technical activities

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Vinyl ads boost revenue. H. J. Seed. *Transport World* (Oct 64) p.40-1. il.

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Articulated buses might work in Britain. W. Lambden. *Bus & Coach*, 36 (Mar 64) p.108-10. il.

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Design features of bus bodies built in South Africa [Bus Bodies (S.A.) Ltd.] *Automotive Body Engrg.*, 133 (Jan 64) p.32-3. il.

There's passenger-appeal in colour and modern materials [Bolton's buses] R. F. Bennett. *Bus & Coach*, 36 (Mar 64) p.92-5. il.

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Brakes. *Bus & Coach*, 36 (18 Nov 64) p.454-7. il.

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Air-operated rear disc brakes for a 16-ton bus. P. M. A. Thomas. *Bus & Coach*, 36 (Dec 64) p.497-501. il.

**BUSES, Chassis**

A.E.C.'s first rear-engined chassis—the Swift. *Passenger Transport*, 127 (Sep 64) p.408+. il.

A.E.C.'s Swift takes two basic forms. P. M. A. Thomas. *Bus & Coach*, 36 (Sep 64) p.318-19. il.

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Cummins V6 at rear on new Daimler single-decker [Roadliner] *Commercial Motor*, 120 (4 Sep 64) p.68-70. il.

Daimler adopts a Vee engine [Roadliner] *Passenger Transport*, 127 (Oct 64) p.482+. il.

Daimler's Cummins-engined unit. P. M. A. Thomas. *Bus & Coach*, 36 (Sep 64) p.315-17. il.

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Latest Daimler p.s.v. chassis has V6 rear-mounted engine. *Transport J.*, 23 (11 Sep 64) p.230-1. il.

Leyland introduces new rear-engined chassis for single-deckers [Panther] *Transport J.*, 22 (14 Feb 64) p.138-9. il.

Leyland Panther. *Passenger Transport*, 127 (Mar 64) p.118-22. il.

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Move the engine and help the driver [Leyland Panther chassis] *Engineering*, 197 (7 Feb 64) p.218-19. il.

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Same size—different breed: Leyland's 'rear-engined Leopard' is called the Panther. J. Dickson-Simpson. *Bus & Coach*, 36 (Feb 64) p.42-4. il.

Sampling the Bristol "RE". A. A. Townsin. *Passenger Transport*, 127 (May 64) p.222+. il.

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Highway club cars appeal to charter groups [Indiana Motor Bus Co.] H. C. Jarman. *Commercial Motor*, 119 (6 Mar 64) p.110-11. il.

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Colour counts. *Passenger Transport*, 127 (Apr 64) p.176-8. il.

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Radio telephones at Leeds. *Transport World* (Apr 64) p.18-19. il.

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Entrances both sides on buses? Summary of "Desirable developments in public service vehicles". H. Perring. *Commercial Motor*, 119 (24 Apr 64) p.61-2

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Dickson-Simpson. *Bus & Coach*, 36 (Oct 64) p.348-53. il.

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Engines. *Bus & Coach*, 36 (18 Nov 64) p.450-3. il.

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Progress report on air-cooled p.s.v. P. A. C. Brockington. *Commercial Motor*, 119 (3 Apr 64) p.64+. il.

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Indoor 'driving' saves time [Bristol Omnibus Co.] P. Wallage. *Bus & Coach*, 36 (Aug 64) p.275-7. il.

**BUSES, Electrical equipment**

Electrical. *Bus & Coach*, 36 (18 Nov 64) p.461-3. il.

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Medley of new and rebuilt depots. *Bus & Coach*, 36 (Jan 64) p.21-3. il.

Some factors affecting the location of depots, workshops and garages. *Bus & Coach*, 36 (Jan 64) p.34-5

We built a garage... P. M. Watson. *Bus & Coach*, 36 (Jan 64) p.2-4

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Advantages of the alternator for meeting p.s.v. electrical loads. R. V. Reyner. *Transport J.*, 22 (10 Apr 64) p.350-1. il.

Trends in fuel injection and electrical equipment. R. V. Reyner. *Passenger Transport*, 127 (Apr 64) p.180+. il.

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Cleaning interiors mechanically saves time and labour. J. Campbell. *Bus & Coach*, 36 (Nov 64) p.396-9. il.

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Progress with new materials for vehicle interiors. M. Clements. *Bus & Coach*, 36 (Dec 64) p.470+. il.

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Accessibility should be improved. R. B. Waite. *Bus & Coach*, 36 (Jul 64) p.253-7. il.  
Craftsmanship and team spirit are the cornerstones [Merthyr Tydfil Corporation] P. Wallage. *Bus & Coach*, 36 (Jul 64) p.236-9. il.

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RAILWAYS, Stations, London, Cannon Street

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## CAPACITANCE

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CAPACITANCE DETECTORS, Control systems, Extrusion, Insulated wires. See WIRES, Insulated, Extrusion, Control systems, Capacitance monitors

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**CARBOXYLIC ACIDS**

## Related Headings:

ALLENIC ACID  
AMINO ACIDS  
ASCORBIC ACID  
BENZENECARBOXYLIC ACIDS  
CHLOROGENIC ACID  
CITRIC ACID  
E.D.T.A.  
FATTY ACIDS  
FORMIC ACID  
FUMARIC ACID  
2-HYDROXY-2-PHENYLBUTYRIC ACID  
KETO ACIDS  
LACTIC ACID  
MALIC ACID  
MALONIC ACID  
METHACRYLIC ACID  
MONTANIC ACID  
NAPHTHENIC ACIDS  
NEOCHLOROGENIC ACID  
OXALIC ACID  
PHTHALIC ACID  
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STEARIC ACID  
THIOBARBITURIC ACID  
TRICHLOROACETIC ACID

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# CATTLE

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COWS  
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- CAVITY MASERS. See MASERS, Cavity
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**CHEESE, Manufactures, Russia**

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**CHEESE, Packaging, Film, Thermoplastics, Shrinkable**

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**CHEESE, Stilton, Manufactures**

Stilton: king of cheese. R. Dawson. *Agriculture*, 71 (Oct 64) p.470-3. il. :

**CHELATING AGENTS**

New deflocculant and sequestrant [Dequest] R. R. Irani & C. F. Callis. *Manufacturing Chemist*, 35 (Jul 64) p.43-5

**CHELATING AGENTS**

Related Headings:  
E.D.T.A.

CHELATING AGENTS, Cleaning, Boilers, Power stations. See POWER STATIONS, Boilers, Cleaning, Chelating agents

CHELATING AGENTS, Cleaning, Internal combustion engines. See ENGINES (Internal combustion) Cleaning, Chelating agents

**CHELSEA**

See  
HOUSING, Chelsea  
HOUSING, Old people, Chelsea  
TOWN PLANNING, Chelsea

**CHELTENHAM SCHOOL OF ARCHITECTURE**

Cheltenham School of Architecture. Builder, 206 (22 May 64) p.1073-5. il.

CHEMICAL ANALYSIS. See ANALYSIS, Chemical

CHEMICAL BALANCES. See BALANCES, Chemical

**CHEMICAL BONDS**

Related Headings:  
VALENCY

CHEMICAL CARRYING TANKERS, Ships. See TANKERS, Ships, Chemical carrying

CHEMICAL CLEANING, Boilers. See BOILERS, Cleaning, Chemical

CHEMICAL CLEANING, Metals. See METALS, Cleaning, Chemicals

CHEMICAL CONTROL, Weeds, Footways. See FOOTWAYS, Weeds, Control, Chemical

CHEMICAL CONVERSION COATING, Aluminium. See ALUMINIUM, Coating (Chemical conversion)

CHEMICAL CONVERSION COATING, Metals. See METALS, Coating (Chemical conversion)

CHEMICAL CONVERSION COATING, Zinc. See ZINC, Coating (Chemical conversion)



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- Chemical reaction engineering: review. D. C. Freshwater. *Chemistry & Industry* (21 Mar 64) p.479-80.
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- Tools of chemical engineer: relationship between technology and science. S. A. Gregory. *Chemistry & Industry* (24 Oct 64) p.1794-8

**CHEMICAL ENGINEERING**

## Related Headings:

CHEMICAL KINETICS  
 CHEMICAL REACTIONS  
 HEATING  
 MIXING  
 MIXTURES  
 PRECIPITATION, Chemical engineering  
 SURFACE ACTIVE AGENTS, Chemical engineering  
 UNIT OPERATIONS  
 UNIT PROCESSES

**CHEMICAL ENGINEERING—SUBHEADINGS—Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

Profession  
 Manpower  
 Graduates  
 Consultants  
 Technicians

Education  
 Research

Costs

Calculations

Relation to electrical engineering

Statistical mathematics

Plant  
 Control systems  
 Electrical installations

Technical activities

Production, Management  
 Programming  
 Critical path analysis  
 Process study  
 Residence times  
 Batch production

Raw materials  
 Fuels  
 Water

By products  
 Effluents

Special fields  
 High pressure

**CHEMICAL ENGINEERING, Batch production, Time variations**

- On the effects of batch time variations on process performance. N. H. Smith & D. F. Rudd. *Chemical Engrg. Science*, 19 (Jun 64) p.403-11. il. refs.

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- Analogue computer as a chemical engineering tool. J. W. Womack. *Chemical & Process Engrg.*, 45 (Feb 64) p.72-6. il. refs.

- Analogue computers in chemical processing. *Chemical Processing*, 10 (Apr 64) p.58-61. il.

**CHEMICAL ENGINEERING, Consultants**

- Consulting. F. E. Warner. *Chemical Engrg.*, 42 (Mar 64) p.33+

**CHEMICAL ENGINEERING, Control systems**

- Control systems for process plant. R. J. Carter. *Control*, 8 (Oct 64) p.507-10. il.

- Smaller chemical plant operator and automation. P. F. Vermeylen. *Chemical Age*, 92 (28 Nov 64) p.815+. il.

**CHEMICAL ENGINEERING, Control systems, Computers**

- Application of analogue computers to process control. J. Drakeford. *Chemical & Process Engrg.*, 45 (Feb 64) p.77-9. il.

- Chemical plant: from Bedlam to Argus. *Engineering*, 198 (20 Nov 64) p.644. il.

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- Development of process control in ICI (summary) A. J. Young. *Chemical Processing*, 10 (Dec 64) p.69-72

- Direct computer control of a chemical process: ICI follow up initial success with order for six Ferranti Argus computers worth £½ million. *Chemical Processing*, 10 (Dec 64) p.68+. il.

- Direction of research on computer control. H. W. Kropholler & D. J. Spikins. *Chemical Age*, 92 (28 Nov 64) p.819-20.

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- High speed and accuracy by automation in the laboratory. T. R. Wills. *Chemical Age*, 92 (28 Nov 64) p.821-2. il.

- I.C.I. set the pace in direct digital control of chemical plants. *Process Control & Automation*, 11 (Nov 64) p.498-501. il.

- "Speed-up" in chemical engineering design. R. W. H. Sargent & A. W. Westerberg. *Chemical Engrg.*, 42 (Jun 64) p.1190-7. refs.

**CHEMICAL ENGINEERING, Control systems, Non-linear, Stability, Liapunov functions**

- Using Liapunov's methods. Report 2: application to process control [summary of "Stability in process control" by C. Storey & J. K. Ellis] N. G. Meadows. *Measurement & Control*, 3 (Jul 64) p.256-7

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- Some notes on the economics of process control in the U.S.S.R. L. A. Steiner. *Brit. Chemical Engrg.*, 9 (Feb 64) p.110-11. il. refs.

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- Progress in chemical process control in America: computers, instrumentation, and applications. T. J. Williams. *Trans. of Instn. of Chemical Engrs.*, 41 (Dec 63) p.CE326-39. il. refs.

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- Scale-up of chemical engineering cost estimations. F. A. Holland & R. Brinkerhoff. *Brit. Chemical Engrg.*, 9 (Jun 64) p.384-8. refs.

**CHEMICAL ENGINEERING, Critical path analysis**

- Critical path method—how to start? H. Walton. *Chemical & Process Engrg.*, 45 (Apr 64) p.183-90

**CHEMICAL ENGINEERING, Education**

Manchester College of Science and Technology: Department of Chemical Engineering. T. K. Ross. *Chemistry & Industry* (27 Jun 64) p.1091-4. il.

**CHEMICAL ENGINEERING, Education, Australia**

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**CHEMICAL ENGINEERING, High pressure, Plant, Corrosion**

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**CHEMICAL ENGINEERING, Plant**

Related Headings:

CHEMICAL REACTORS

CONDENSERS

FLUIDISED BEDS

HOMOGENISERS, Ultrasonic

KETTLES, Steel, Stainless, Chemical plant

PACKED BEDS

PACKED COLUMNS

PLATE COLUMNS

PRESSURE VESSELS

PUMPS, Centrifugal, Chemical plant

PUMPS, Chemical plant

PUMPS, Titanium, Chemical plant

**CHEMICAL ENGINEERING, Plant, Air pollution.** See AIR

POLLUTION, Chemical engineering plant

**CHEMICAL ENGINEERING, Plant, Alarms**

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**CHEMICAL ENGINEERING, Plant, Corrosion, Effect of design**

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**CHEMICAL ENGINEERING, Plant, Costs, Indices**

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**CHEMICAL ENGINEERING, Plant, Polyesters**

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**CHEMICAL ENGINEERING, Profession**

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**CHEMICAL INDUSTRIES. See CHEMICAL TECHNOLOGY****CHEMICAL KINETICS**

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**CHEMICAL KINETICS, Effect on thermal conductivity, Gases.**

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**CHEMICAL KINETICS, Studies, Flowmeters**

Circulating pump and flowmeter for kinetic reaction apparatus. D. Kallo, I. Preszler & K. Payer. J. of Scientific Instruments, 41 (May 64) p.338-40. il. refs.

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**CHEMICAL MACHINING**

Related Headings:  
CONTOUR ETCHING

**CHEMICAL POLISHING**

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**CHEMICAL REACTIONS, Diffusion, Turbulence, Marangoni effect**

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**CHEMICAL REACTIONS, Homogeneous, First order (Chemical reactors, Stirred) Rate constants**

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**CHEMICAL REACTIONS, Non-porous spherical catalysts. See CATALYSTS, Spherical, Non-porous, Chemical reactions**



**CHEMICAL REACTIONS, Organic chemicals.** See  
ORGANIC CHEMICALS, Reactions

**CHEMICAL REACTIONS, Sites, Chain folds, Polymers.** See  
POLYMERS, Chain folds, Chemical reactions sites

**CHEMICAL REACTIONS, Solutions.** See SOLUTIONS, Chemical reactions

**CHEMICAL REACTORS, Stirred, Bubbles, Mass transfer**  
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**CHEMICAL REACTORS, Catalytic, Fixed bed, Control systems, Computers**

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**CHEMICAL REACTORS, Design, Simulators, Computers**

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**CHEMICAL REACTORS, Discs, Rotating**

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**CHEMICAL REACTORS, Gas flow, Control systems**

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**CHEMICAL REACTORS (Gas recycle) Control systems**

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**CHEMICAL REACTORS, Stirred, Brass catalysed dehydrogenation, sec-Butyl alcohol.** See sec-BUTYL ALCOHOL, Dehydrogenation, Brass-catalysed, Stirred chemical reactors

**CHEMICAL REACTORS, Stirred, Control systems,**

Pontryagin's principle

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**CHEMICAL TECHNOLOGY**

Related Headings:

ACIDS

ADHESIVES

AGRICULTURAL CHEMICALS

ALKALIS

ASBESTOS CEMENT

BASES (Chemistry)

BEVERAGES

BLEACHES

BLEACHING

CEMENT, Production

CERAMICS

CHEMICALS

COLLOIDS

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FREQUENCY, Synthesisers

GATE CIRCUITS

INTEGRATORS, Electronics

LIMITERS

MIXERS, Microwaves

MODULATORS

MULTIPLIERS, Electronics

OSCILLATORS

PHASE DELAY, Circuits

PHASE MODULATORS

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**CLATHRATES**

## Related Headings:

NICKEL CYANIDE-AMMONIA-BENZENE CLATHRATE

NITROGEN-HYDROQUINONE CLATHRATE

**CLAY**

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FOOTWEAR  
HOSIERY  
KNITWEAR  
NIGHTWEAR  
OUTERWEAR  
SCARVES  
SUITINGS  
TIGHTS  
TROUSERS  
UNDERWEAR

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**CLOUDS, Pictures, Meteorology, Artificial satellites. See**

**SATELLITES, Artificial, Meteorology, Cloud pictures**

**CLOVER, Sweet. See SWEET CLOVER****CLUB CARS, Buses. See BUSES, Club cars****CLUBHOUSES**

Club, Champs Elysées, Paris. *Architectural Design*, 34 (May 64) p.254-5. il.

**CLUBHOUSES, Interior design**

Club 44, La Chaux de Fonds, Switzerland, 1956. *Architectural Design*, 34 (Mar 64) p.141. il.

**CLUBHOUSES (Sailing). See SAILING, Clubhouses****CLUBHOUSES, Sports**

Bowling pavilion, Kingswood, Bristol. *Architect & Building News*, 225 (29 Jan 64) p.191-2. il.

Offices, clubhouse and pavilion complex for Brown & Polson Ltd. Builder, 206 (19 Jun 64) p.1279-82. il.

Recreation club, Luton. *Architect & Building News*, 226 (5 Aug 64) p.253-6. il.

**CLUTCHES (Earth moving equipment) Linings**

Brake linings for contractor's plant. F. M. Barnell. *Muck Shifter & Bulk Handler*, 21 (Dec 63) p.512+. il.

**CLUTCHES, Magnetic**

Electro-magnetic clutches and brakes, pt.1. H. Sains. *Instrument Practice*, 18 (Mar 64) p.242-8. il.

**CLUTCHES, Magnetic, Control systems**

Electro-magnetic clutches and brakes, pt.2: automatic control of clutches and brakes. H. Sains. *Instrument Practice*, 18 (Apr 64) p.340-4. il.

**CLUTCHES, Motor cars**

Clutches: new diaphragm spring type clutch introduced and detail modifications to existing designs. R. F. Ansdale. *Automobile Engr.*, 54 (20 May 64) p.222-4. il.

How it works, pt.4: the clutch. *Motor*, 124 (25 Dec 63) p.48-9. il.

**CLUTCHES (Motor cars) Springs, Diaphragm**

Diaphragm spring clutch: new Borg and Beck unit for the transversely-mounted engines of B.M.C. Mini-Cooper and S-type models. *Automobile Engr.*, 54 (Jul 64) p.318-19. il.

**CLUTCHES (Motor cars) Temperature, Calculations**

Clutch temperatures. T. P. Newcomb. *Automobile Engr.*, 54 (Apr 64) p.145-7. il. refs.

**CLUTCHES (Motor cycles) Maintenance**

Villiers clutch check: adjustments for sweet operation. *Motor Cycle*, 112 (23 Apr 64) p.502-4. il.

**CLUTCHES, Oil-cooled, Crawler tractors. See TRACTORS, Crawler, Clutches, Oil-cooled****CLUTCHES, Plates, Metal, Sintered**

Activities of the Sintered Metals Division of Ferodo Ltd. J. J. Marklew. *Machinery*, 104 (25 Mar 64) p.694-9. il.

## CLYDE RIVER

See

DOCKS, Dry, Greenock

## CLYDE VALLEY

See

ENGINEERING, Clyde Valley

## CLYWEDOG

See

DAMS, Reservoirs, Clywedog

COACH BUILDING SHOPS, Service stations, Motor vehicles.

See MOTOR VEHICLES, Service stations, Coach building shops

COACHES. See MOTOR COACHES

COAGULANT DIPPING, Latex, Nitrile rubber. See NITRILE

RUBBER, Latex, Dipping, Coagulant

COAGULATION, Water. See WATER, Coagulation

## COAL

Marketing with special reference to coal preparation. A.

Harrison Slade. Colliery Guardian, 208 (24 Apr 64)

p.547-9

## COAL

Related Headings:

COKE

FUELS, Solid

LIGNITE

## COAL—SUBHEADINGS—Synopsis

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

Research

Physico-chemical aspects

*Irradiation**Gamma irradiation**Drill cores*

Physics

*Breakage**Creep**Thermal conductivity**Reflectivity**Surface area measurement**Gamma**Electron irradiation*

Chemistry

*Combustion**Ignition**Photolysis**Oxidation**Reduction**Dehydrogenation**Carbonisation**Reaction with...**Constituents**Inorganic chemicals**Hydrogen distribution**Moisture**Ash**Analysis**Determination of...*

Geology

*Resources**Seams**Minerals**Pyrites*

## COAL—SUBHEADINGS—Synopsis—cont.

Technical operations

*Prospecting**Mining**Reclamation**Preparation**Flotation**Cleaning**Blending**Sampling**Briquetting**Chemical processing**Gasification**Mechanical handling**Bulk handling**Loading**Weighing**Distribution**Transport**Pipelines**Barges**Storage**Bunkers*

Forms of coal

*Pulverised*

Kinds of coal

*Brown**Bituminous**Synthetic*

Utilisation

## COAL, Analysis, Standards

Recent development in standard methods for the analysis of coal and coke [B.S. 1016] D. E. Shipley. J. of Inst. of Fuel, 37 (Nov 64) p.510-14. refs.

## COAL, Ash, Analysis

Analysis of a bank of standard ashes. K. Dixon, A. H. Edwards, D. Flint & R. G. James. Fuel: J. of Fuel Science, 43 (Sep 64) p.331-47. il. refs.

Appraisal of methods for the analysis of coal ash. R. G. James. Brit. Coal Utilisation Res. Ass. Monthly Bull., 28 (Jun 64) p.241-57. refs.

## COAL, Ash, Analysis, Standardisation

Accuracy of the B.S. methods for the analysis of coal ash. D. Flint. Fuel: J. of Fuel Science, 43 (Jul 64) p.321-30. refs.

## COAL, Barges, Steel, Welding, Arc

Welding of "Tompuddings". Welder, 33 (Apr/Jun 64) p.40-2. il.

## COAL, Barges, Unloading, Bucket conveyors

Continuous bucket.barge unloader accelerates coal handling. Storage Handling Distribution, 8 (Sep 64) p.71+. il.

## COAL, Bituminous, Analysis, Solvent extraction, Benzene

Analysis of benzene extracts of Yubari coal, pt.2: analysis by gas chromatography. K. Ouchi & K. Imuta. Fuel: J. of Fuel Science, 42 (Nov 63) p.445-56. il. refs.

## COAL, Bituminous, Determination of carbon, Proximate analysis, Nomograms

Total carbon in bituminous coal. D. S. Davis. Gas World, 159 (30 May 64) p.697

## COAL, Bituminous, Macerals, Analysis, Point counter technique

Reproducibility and accuracy of maceral analysis of coal by point counter technique. D. Chandra. Fuel: J. of Fuel Science, 42 (Nov 63) p.457-65. il. refs.



- COAL, Bituminous, Macerals, Vitrinite**  
Variations in the properties of vitrinite in isometamorphic coal. H. R. Brown, A. C. Cook & G. H. Taylor. *Fuel: J. of Fuel Science*, 43 (Mar 64) p.111-24. il. refs.
- COAL, Bituminous, Macerals, Vitrinite, Aliphatic hydrogen distribution**  
Aliphatic hydrogen distribution in a vitrinite and its extraction products. J. F. M. Oth & H. Tschamler. *Fuel: J. of Fuel Science*, 42 (Nov 63) p.467-78. il. refs.
- COAL, Bituminous, Solvent extraction, Soxhlet**  
Improved technique for the Soxhlet extraction of coal. R. Raymond, I. Wender & L. Reggel. *Fuel: J. of Fuel Science*, 43 (Jul 64) p.299-301. refs.
- COAL, Bituminous, Specific heat, Nomograms**  
Specific heat of bituminous coal. D. S. Davis. *Gas World*, 159 (29 Feb 64) p.315
- COAL, Blending, Machines**  
Small coal blending at Shirebrook. *Colliery Engng.*, 41 (Oct 64) p.407-10. il.
- COAL, Boilers.** See **BOILERS, Coal**
- COAL, Boilers, Power stations.** See **POWER STATIONS, Boilers, Coal**
- COAL, Breakage, Effect of machines**  
Determining breakage in mechanised coal mining (extract) D. A. Hall. *Mining Equipment International*, 15 (Jul 64) p.4-5
- COAL, Briquetting, Compaction**  
Compaction phenomena in char briquetting. G. M. Habberjam. *Brit. J. of Applied Physics*, 15 (Oct 64) p.1233-42. il. refs.
- COAL, Brown, Firing, Cupolas.** See **CUPOLAS, Brown coal fired**
- COAL, Brown, Firing, Gas turbines.** See **GAS TURBINES, Brown coal fired**
- COAL, Brown, Humic acids, Hydrogenation**  
Hydrogenation of reactive groups in Yallourn brown coal. T. J. Birch & J. D. Blackwood. *Nature*, 201 (22 Feb 64) p.797-8. il. refs.
- COAL, Brown, Mining, Opencast, Excavators**  
German approach to mass excavation. *Engineering*, 198 (4 Dec 64) p.706-7. il.
- COAL, Bulk handling**  
Bulk handling of coal. E. H. Browne. *Brit. Transport Rev.*, 7 (Aug 63) p.161-72  
Bulk handling of coal. E. H. Browne. *Steel & Coal*, 187 (27 Dec 63) p.1270-6. il.
- COAL, Bunkers**  
Automated storage bunker. [R. Horsfield & Co.] *Colliery Engng.*, 41 (Jan 64) p.11-16. il.  
Automated storage bunker for underground or surface mine operation [Horsfield Automated Storage Bunker] *Mining Equipment International*, 15 (Jun 64) p.7. il.  
Automated storage bunker [Horsfield Automated Storage Bunker] *Mining J.*, 261 (20 Dec 63) p.588-9. il.  
Automation at the shaft bottom [Horsfield bunker] *Colliery Guardian*, 208 (17 Jan 64) p.86-8. il.  
Selective static storage bunker [Crawley Industrial Products Ltd.] *Colliery Engng.*, 41 (Jun 64) p.224-6. il.
- COAL, Carbon tetrachloride production.** See **CARBON TETRACHLORIDE, Production, Coal**
- COAL, Carbonisation**  
Investigation into the economics of gas manufacture from coal. R. J. Maher. *Gas J.*, 320 (16 Dec 64) p.365-7  
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- COAL, Carbonisation, Effluents, Effect on filtration, Sewage treatment.** See **SEWAGE, Treatment, Filtration, Effect of coal carbonisation effluents**
- COAL, Carbonisation, Flash heating**  
Heating of coal with light pulses. E. Rau & L. Seglin. *Fuel: J. of Fuel Science*, 43 (Mar 64) p.147-57. il. refs.
- COAL, Cleaning**  
Prediction of loss of yield in dense medium separators. K. F. Tromp. *Colliery Engng.*, 41 (Jan 64) p.17-20. il. refs.  
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- COAL, Cleaning, Plant**  
Partial cleaning of small coal [Bretby Hybrid Cone] J. H. Warden & A. Watson. *Colliery Engng.*, 41 (Aug 64) p.313-18. il.
- COAL, Cleaning, Samples, Analysis**  
Improved release analysis procedure for determining coal washability. C. C. Dell. *J. of Inst. of Fuel*, 37 (Apr 64) p.149-50. il. refs.
- COAL, Cleaning, Shale, Crushers, Impeller bars**  
Just a detail, no.3: impeller bars for the rotor of an impact breaker. P. Stephenson. *Engineer*, 217 (20 Mar 64) p.524-5. il.
- COAL, Cleaning, Shale, Disintegration, Inhibitors**  
Shale breakdown problem in coal washing, pt.2: some causes of shale breakdown and means for its control. A. E. Horton, M. Manacherman & W. E. Rayboald. *J. of Inst. of Fuel*, 37 (Feb 64) p.52-8. il. refs.
- COAL, Cleaning, Tailings, Flocculated, Thickening**  
Mechanism of removal of water from flocculated clay sediments. C. C. Dell & J. Sinha. *Trans. of Brit. Ceramic Soc.*, 63 (Oct 64) p.603-14. il. refs.
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- COAL, Coal tar production.** See **COAL TAR, Production, Coal**
- COAL, Coking.** See **COKING, Coal**
- COAL, Creep**  
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- COAL, Cyclone furnaces, Boilers.** See **BOILERS, Furnaces, Cyclone, Coal**
- COAL, Dehydrogenation**  
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- COAL, Determination of fluorine**  
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- COAL, Determination of oxygen, Nomograms**  
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- COAL, Determination of oxygen (Organic chemicals) Schütze reagent**  
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First step in new coal distribution network. *Steel & Coal*, 187 (27 Dec 63) p.1253-4. il.  
Mechanical coal centre [Neasden] *Mechanical Handling*, 51 (Jul 64) p.429-30. il.  
Mechanised coal depot. *Colliery Guardian*, 207 (26 Dec 63) p.797-9. il.  
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Mechanised coal depot opened at West Drayton. *Contract J.*, 197 (2 Jan 64) p.29+. il.  
N.C.B. mechanise to handle 200,000 tons of coal per year [West Drayton] *Storage Handling Distribution*, 7 (Feb 64) p.44-5. il.  
Speeding solid fuel services [West Drayton depot] *Fuel Efficiency*, 12 (Feb 64) p.28+  
Strategic distribution of coal. *Colliery Engng.*, 41 (Feb 64) p.57-60. il.  
West Drayton coal depot. *Mechanical Handling*, 51 (Feb 64) p.80-3. il.  
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Domestic coal bagging plant [John Hudson Ltd.] *Engineer*, 218 (27 Nov 64) p.868. il.  
For handling coal: a circular layout [John Hudson, Ltd.] *Engineering*, 198 (4 Dec 64) p.730. il.

**COAL, Drill cores, Extraction, Machines**

Machine provides hermetically-sealed drill cores. *Mining Equipment International*, 15 (Jan 64) p.16. il.

**COAL, Dust, Effect on stability, Green sand moulds, Casting, Iron. See IRON, Casting, Moulds, Sand, Green, Stability, Effect of coal dust****COAL, Dust—Air, Flames. See FLAMES, Coal dust—Air****COAL, Electron irradiation**

Electron irradiation of coal. D. J. Brown & G. J. Pitt. *Fuel: J. of Fuel Science*, 43 (Nov 64) p.445-51. refs.

**COAL, Flotation, Conditioning**

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**COAL, Flotation, Heavy medium**

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**COAL, Gamma irradiation, Electron spin resonance**

Electron spin resonance of gamma-irradiated coals. S. Toyoda. *Fuel: J. of Fuel Science*, 42 (Nov 63) p.431-43. il. refs.

**COAL, Gasification, Underground**

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**COAL, Hydrogen distribution, Nuclear magnetic resonance, Line-shapes**

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**COAL, Ignition, Spontaneous**

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**COAL, Mining, Betcheshanger Colliery**

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Computer in mining. F. C. Swallow. Colliery Engr., 41 (Jun 64) p.253-6

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Tandem hydraulic anchor stations. Colliery Engr., 41 (Apr 64) p.139-41. il.

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**COLD DRAWING**, Steel, Bars. See BARS, Steel, Cold drawing

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DISPERSIONS

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SUSPENSIONS, Colloids

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**COLOUR, Densitometry, Temperature measurement. See TEMPERATURE, Measurement, Colour densitometry**

**COLOUR, Dispensers, Paint. See PAINT, Colour dispensers**

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**COMBUSTION, Diesel engines.** See **DIESEL ENGINES, Combustion**



- COMBUSTION, Droplets, Liquid fuels.** See **FUELS, Liquid, Droplets, Combustion**
- COMBUSTION, Fuel oil.** See **FUEL OIL, Combustion**
- COMBUSTION, Fuels, Power stations.** See **POWER STATIONS, Fuels, Combustion**
- COMBUSTION, Gas oil.** See **GAS OIL, Combustion**
- COMBUSTION, Gases, Fuels, Dual fuel engines.** See **ENGINES, Dual fuel, Fuels, Gases, Combustion**
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- COMBUSTION, Gases, Vibrations, Liquid fuelled engines, Rockets.** See **ROCKETS, Liquid fuelled, Engines, Vibrations, Combustion gases**
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- COMPRESSED AIR, Storage, Gas turbine alternators. See **ALTERNATORS, Gas turbines, Compressed air storage**

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**DISCS, Parallel, Flow, Radial, Compressible**

**COMPRESSION, Cantilever struts.** See **STRUTS, Cantilever, Compression**

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## COMPRESSION TESTS

Related Headings:

HARDNESS, Tests

COMPRESSION TESTS, Aluminium. See ALUMINIUM, Compression tests

COMPRESSION TESTS, Concrete. See CONCRETE, Compression tests

COMPRESSION TESTS, Lead. See LEAD, Compression tests

COMPRESSION TESTS, Plane strain, High temperature, Coefficient of friction, Aluminium. See ALUMINIUM, Friction, Coefficient, High temperature, Plane-strain compression tests

COMPRESSIVE LOAD, Axial, Corrections, Virtual work, Critical load, Structures. See STRUCTURES, Critical Load, Virtual work, Corrections, Axial compressive load

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## COMPUTERS

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DIFFERENTIAL ANALYSIS, Digital  
DIGITAL-TO-ANALOGUE CONVERTERS  
READING MACHINES  
SHIFT REGISTERS

## COMPUTERS—SUBHEADINGS—Synopsis

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

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COMPUTERS, Accounting, Pay, Soldiers. See SOLDIERS, Pay, Accounting, Computers

## COMPUTERS, Adders

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COMPUTERS, Air transport statistics. See AIR TRANSPORT, Statistics, Computers

#### COMPUTERS, Aircraft

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COMPUTERS, Alignment calculations, Shafts, Propellers, Ships. See SHIPS, Propellers, Shafts, Alignment, Calculations, Computers

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#### COMPUTERS, Analogue

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AMPLIFIERS, Operational

COMPUTERS, Analogue, Air conditioning research. See AIR CONDITIONING, Research, Computers, Analogue

COMPUTERS, Analogue, Analysis, Steam turbine governors, Effect on transient stability, Turbo-alternators. See TURBO-ALTERNATORS, Stability, Transient, Effect of steam turbine governors, Analysis, Analogue computers

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COMPUTERS, Analogue, Chemical engineering calculations. See CHEMICAL ENGINEERING, Calculations, Computers, Analogue

COMPUTERS, Analogue, Control systems, Mixing. See MIXING, Control systems, Computers, Analogue

#### COMPUTERS, Analogue, Errors, Phase

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COMPUTERS, Analogue, Hill climbing, Control systems. See CONTROL SYSTEMS, Hill climbing, Computers, Analogue

#### COMPUTERS, Analogue, Multipliers, Product converters

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COMPUTERS, Analogue, Polynomial equation solution, Vibrations, Mass-Spring systems. See MASS-SPRING SYSTEMS, Vibrations, Equations, Polynomial, Solution, Computers, Analogue

COMPUTERS, Analogue, Pressure distribution, Mains, Water. See WATER, Mains, Pressure distribution, Computers, Analogue

COMPUTERS, Analogue, Production control. See PRODUCTION, Control, Computers, Analogue

COMPUTERS, Analogue, Simulation, Control systems. See CONTROL SYSTEMS, Simulators, Computers, Analogue

COMPUTERS, Analogue, Simulation, Distribution, Water supplies. See WATER, Supplies, Distribution, Simulation, Computers, Analogue

COMPUTERS, Analogue, Simulation, Hydraulic servomotors. See SERVOMOTORS, Hydraulic, Simulators, Computers, Analogue

COMPUTERS, Analogue, Simulation, Induction motors. See ELECTRIC MOTORS, Induction, Simulators, Computers, Analogue

COMPUTERS, Analogue, Simulation, Stoves, Blast furnaces. See FURNACES, Blast, Stoves, Simulation, Computers, Analogue

COMPUTERS, Analogue, Steel production research. See STEEL, Production, Research, Computers, Analogue

COMPUTERS, Analogue, Structural analysis, Gridworks. See GRIDWORKS, Structural analysis, Computers, Analogue

COMPUTERS, Analogue, Temperature control studies, Nuclear reactors. See NUCLEAR REACTORS, Temperature control, Studies, Computers, Analogue

COMPUTERS, Analogue, Transient stability analysis, Electric power systems. See ELECTRIC POWER SYSTEMS, Stability, Transient, Analysis, Computers, Analogue

COMPUTERS, Analogue, Transient stability analysis, Turbo-alternators. See TURBO-ALTERNATORS, Stability, Transient, Analysis, Computers, Analogue

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COMPUTERS, Analysis, Autoreclosing circuit breakers, Effect on transient stability, Electric power systems. See ELECTRIC POWER SYSTEMS, Stability, Transient, Effect of autoreclosing circuit breakers, Analysis, Computers

#### COMPUTERS, Belgium

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COMPUTERS, Building. See BUILDING, Computers

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Computer and offices in Worcester. Architectural Design, 34 (Nov 64) p.580-1. il.

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**COMPUTERS, Business.** See **BUSINESS, Computers**

**COMPUTERS, Chemical engineering plant design.** See

**CHEMICAL ENGINEERING, Plant, Design, Computers**

**COMPUTERS, Chemical kinetics analysis, Effect on thermal conductivity, Gases.** See **GASES, Thermal conductivity, Effect of chemical kinetics, Analysis, Computers**

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**COMPUTERS, Classification systems, Building.** See **BUILDING, Classification systems, Computers**

**COMPUTERS, Coal mining.** See **COAL, Mining, Computers**

**COMPUTERS, Coding, Words.** See **WORDS, Coding, Computers**

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**COMPUTERS, Colour matching, Paint.** See **PAINT, Colour matching, Computers**

**COMPUTERS, Composing, Printing.** See **COMPOSING, (Printing) Computers**

**COMPUTERS, Composing, Printing, Lists.** See **LISTS, Printing, Composing, Computers**

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**COMPUTERS, Control systems, Cake manufacture.** See **CAKE, Manufacture, Control systems, Computers**

**COMPUTERS, Control systems, Cement kilns.** See **CEMENT, Kilns, Control systems, Computers**

**COMPUTERS, Control systems, Conveyors, Newsprint.** See **NEWSPRINT, Conveyors, Control systems, Computers**

**COMPUTERS, Control systems, Electric power systems.** See

**ELECTRIC POWER SYSTEMS, Control systems, Computers**

**COMPUTERS, Control systems, Fixed bed catalytic chemical reactors.** See **CHEMICAL REACTORS, Catalytic, Fixed bed, Control systems, Computers**

**COMPUTERS, Control systems, Flying shears, Shearing, Steel, Billets.** See **BILLETS, Steel, Shearing (Shears, Flying) Control systems, Computers**

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**COMPUTERS, Control systems, Lubricated taper valve manufactures.** See **VALVES, Taper, Lubricated, Manufactures, Control systems, Computers**

**COMPUTERS, Control systems, Lubrication.** See **LUBRICATION, Control systems, Computers**

**COMPUTERS, Control systems, Machine tools.** See **MACHINE TOOLS, Control systems, Computers**

**COMPUTERS, Control systems, Milling machines, Blades, Steam turbines.** See **STEAM, Turbines, Blades, Milling, Machines, Control systems, Computers**

**COMPUTERS, Control systems, Nuclear power stations.** See **NUCLEAR POWER STATIONS, Control systems, Computers**

**COMPUTERS, Control systems, Papermaking.** See **PAPER-MAKING, Control systems, Computers**

**COMPUTERS, Control systems, Power stations.** See **POWER STATIONS, Control systems, Computers**

**COMPUTERS, Control systems, Railways, Transport, Ores, Iron.** See **IRON, Ores, Transport, Railways, Control systems, Computers**

**COMPUTERS, Control systems, Refineries, Petroleum.** See **PETROLEUM, Refineries, Control systems, Computers**

**COMPUTERS, Control systems, Refining, Petroleum.** See **PETROLEUM, Refining, Control systems, Computers**

**COMPUTERS, Control systems, Rolling mills, Steel, Plates.** See **PLATES, Steel, Rolling, Mills, Control systems, Computers**

**COMPUTERS, Control systems, Rolling mills, Steel, Strips.** See **STRIPS, Steel, Rolling, Mills, Control systems, Computers**

**COMPUTERS, Control systems, Signals, Traffic, Roads.** See **ROADS, Traffic, Signals, Control systems, Computers**

**COMPUTERS, Control systems, Silk screen printing, Fabrics.** See **FABRICS, Printing, Silk screen, Control systems, Computers**

**COMPUTERS, Control systems, Speed, Presses, Extrusion, Metals.** See **METALS, Extrusion, Presses, Speed, Control systems, Computers**

**COMPUTERS, Control systems, Steel production.** See **STEEL, Production, Control systems, Computers**

**COMPUTERS, Control systems, Town gas distribution.** See **GAS (Town) Distribution, Control systems, Computers**

**COMPUTERS, Control systems, Town gas production.** See **GAS (Town) Production, Control systems, Computers**

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**COMPUTERS, Education**

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**COMPUTERS, Electric power system analysis.** See

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**COMPUTERS, Electron trajectories analysis, Image tubes.** See **IMAGE TUBES, Electrons, Trajectories, Analysis, Computers**

**COMPUTERS, Engineering.** See **ENGINEERING, Computers**

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**COMPUTERS, Fires**

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**COMPUTERS, Forecasting, Meteorology.** See **METEOROLOGY, Forecasting, Computers**

**COMPUTERS, Games, Operational research.** See **OPERATIONAL RESEARCH, Games, Computers**

**COMPUTERS, Glass research.** See **GLASS, Research, Computers**

**COMPUTERS, Great Britain**

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**COMPUTERS, Heat balance calculations, Feedwater, Boilers, Ships.** See **SHIPS, Boilers, Feedwater, Heat balance, Calculations, Computers**

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**COMPUTERS, Input units, Paper tape, Checking, Machines**

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**COMPUTERS, Job analysis, Shipbuilding.** See **SHIP-BUILDING, Job analysis, Computers**

**COMPUTERS, Laplace equation calculation, Current-density distribution, Electrolysis.** See **ELECTROLYSIS, Current-density distribution, Laplace equation, Calculation, Computers**

**COMPUTERS, Leaf spring analysis, Motor cars.**

See **MOTOR CARS, Springs, Leaf, Analysis, Computers**

**COMPUTERS, Load control, Power supplies, Arc furnaces, Steel production.** See **STEEL, Production, Furnaces, Arc, Power supplies, Load control, Computers**

**COMPUTERS, Load-Flow analysis, Electric power systems.** See **ELECTRIC POWER SYSTEMS, Load-Flow, Analysis, Computers**

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**COMPUTERS, Maintenance, Pipelines, Town gas. See GAS (Town) Pipelines, Maintenance, Computers****COMPUTERS, Maintenance, Town gas production. See GAS (Town) Production, Maintenance, Computers****COMPUTERS, Maintenance control, Machine tools. See MACHINE TOOLS, Maintenance, Control, Computers****COMPUTERS, Manufactures, Organisations**

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**COMPUTERS, Motor car design. See MOTOR CARS, Design, Computers****COMPUTERS, Motor vehicle manufacture research. See MOTOR VEHICLES, Manufactures, Research, Computers****COMPUTERS, Movement recording, Railway wagons. See RAILWAYS, Wagons, Movement recording, Computers****COMPUTERS, Negative impedance converter design, Filters. See FILTERS, Frequency, Negative impedance converters, Design, Computers****COMPUTERS, Netherlands**

- Computers in Benelux. W. K. de Bruijn. *Computer Bull.*, 8 (Jun 64) p.18-19

**COMPUTERS, Network analysis, Ventilation. See VENTILATION, Networks, Analysis, Computers****COMPUTERS, Office building construction. See OFFICE BUILDINGS, Construction, Computers****COMPUTERS, Operational research. See OPERATIONAL RESEARCH, Computers****COMPUTERS, Operational research, Aircraft movements, Airports. See AIRPORTS, Aircraft movements, Operational research, Computers****COMPUTERS, Optical logic devices**

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**COMPUTERS, Output units, Diazo compounds**

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**COMPUTERS, Petrol engine performance calculations. See PETROL, Engines, Performance, Calculations, Computers****COMPUTERS, Ports operation. See PORTS, Operation, Computers****COMPUTERS, Powder photograph data processing, X-ray diffraction. See X-RAYS, Diffraction, Powder photographs, Data processing, Computers****COMPUTERS, Power flow calculations, High voltage d.c. power transmission. See POWER TRANSMISSION, D.C., High voltage, Power flow, Calculations, Computers****COMPUTERS, Process control, Chemical engineering. See CHEMICAL ENGINEERING, Control systems, Computers****COMPUTERS, Production control. See PRODUCTION, Control, Computers****COMPUTERS, Production control, Shoe manufactures. See SHOES, Manufactures, Production, Control, Computers****COMPUTERS, Programs**

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#### CONCRETE

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#### CONCRETE

Related Headings:  
CEMENT

#### CONCRETE-SUBHEADINGS-Synopsis

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

##### Research

##### Properties

##### Strength

*Stress-strain relationships*

*Impact strength*

*Compression tests*

*Creep*

##### Chemistry

*Water sorption*

*Determination of...*

##### Technical activities

##### Production

*Mixing*

*Mixes*

##### Handling

*Pumps*

##### Testing

##### Materials

*Additives*

*Aggregates*

*Sand*

*Pulverised fuel ash*

##### Kinds of concrete by process

*Bitumen sealed*

*Saturated*

*Ready mixed*

*Lightweight*

*Lightweight aggregate*

*Reinforced*

*Prestressed*

*Post-tensioned*

##### Kinds of concrete by material

*Capstone aggregate*

*Polyester resin*

#### CONCRETE-SUBHEADINGS-Synopsis-cont.

##### Kinds of concrete by function

*Decorative*

*Textured*

*Heat-resistant*

##### Applications

*Building materials*

*Farm building materials*

*Prefabricated building materials*

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Concrete additives from the viewpoint of the large contractor. C. Hobbs. *Chemistry & Industry* (28 Mar 64) p.526-35. il. refs.

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CONCRETE, Beams. See BEAMS, Concrete

CONCRETE, Beams, Elevated roads. See ROADS, Elevated, Beams, Concrete

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General survey of post-war developments in concrete.

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Structural and artistic combination [Capstone concrete units] *Engineering*, 197 (14 Feb 64) p.262-3. il.

CONCRETE, Coastal works. See COASTAL WORKS, Concrete

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#### CONCRETE, Creep, Effect of mix richness

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#### CONCRETE, Creep, Tensile stresses, Testing

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**CONCRETE, Cylindrical tanks.** See **TANKS, Cylindrical, Concrete**

**CONCRETE, Dams.** See **DAMS, Concrete**

**CONCRETE, Determination of moisture, Neutron detectors, Boron trifluoride, Cadmium covered**

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**CONCRETE, Embedded steel penstocks.** See **PENSTOCKS, Steel, Concrete embedded**

**CONCRETE, Farm building materials**

Cement and Concrete Association. T. W. Hendrick. *Farm-buildings* (Autumn 64) p.65-6. il.

**CONCRETE, Floors.** See **FLOORS, Concrete**

**CONCRETE, Foot bridges.** See **BRIDGES, Foot, Concrete**

**CONCRETE, Foundations, Buildings.** See **BUILDINGS, Foundations, Concrete**

**CONCRETE, Gas, Houses.** See **HOUSES, Concrete, Gas**

**CONCRETE, Heat-resistant**

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Refractory concretes and castables. A. E. Adams.

*Refractories J.* (Jan 64) p.17-18

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**CONCRETE, Houses.** See **HOUSES, Concrete**

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Impact strength of concrete. H. Green. *Instn. of Civil Engrs. Proc.*, 28 (Jul 64) p.383-96. il. refs.

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**CONCRETE, Lightweight, Houses.** See **HOUSES, Concrete, Lightweight**

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Lightweight aggregates in blocks, screeds and panels.

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**CONCRETE, Linings, Roads, Coal mining** See **COAL, Mining, Roads, Linings, Concrete**

**CONCRETE, Linings, Tunnels, Hydroelectric power**

stations. See **HYDROELECTRIC POWER STATIONS, Tunnels, Linings, Concrete**

**CONCRETE, Machine tool components.** See **MACHINE TOOLS, Components, Concrete**

**CONCRETE, Mattresses, Banks, Rivers.** See **RIVERS, Banks, Mattresses, Concrete**

**CONCRETE, Mixes, Effect of sand**

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**CONCRETE, Open circular tanks.** See **TANKS, Circular, Open, Concrete**

**CONCRETE, Panels, Flats.** See **FLATS, Panels, Concrete**

**CONCRETE, Piles.** See **PILES, Concrete**

**CONCRETE, Pipelines.** See **PIPELINES, Concrete**

**CONCRETE, Pipes.** See **PIPES, Concrete**

**CONCRETE, Pipes, Sewers.** See **SEWERS, Pipes, Concrete**

**CONCRETE, Poles, Overhead power transmission lines.** See **POWER TRANSMISSION LINES, Overhead, Poles, Concrete**

**CONCRETE, Polyester resin**

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**CONCRETE, Post-tensioned, Bridges.** See **BRIDGES, Concrete, Post-tensioned**

**CONCRETE, Post-tensioned, End blocks, Reinforcement**

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**CONCRETE, Precast, Buildings.** See **BUILDINGS, Concrete, Precast**

**CONCRETE, Precast, Chimneys.** See **CHIMNEYS, Concrete, Precast**

**CONCRETE, Precast, Floors.** See **FLOORS, Concrete, Precast**

**CONCRETE, Precast, Housing.** See **HOUSING, Concrete, Precast**

**CONCRETE, Precast, Military buildings.** See **MILITARY BUILDINGS, Concrete, Precast**

**CONCRETE, Precast, Panels.** See **PANELS, Concrete, Precast**

**CONCRETE, Precast, Piles.** See **PILES, Concrete, Precast**

**CONCRETE, Precast, Roofs.** See **ROOFS, Concrete, Precast**

**CONCRETE, Precast, Segments, Linings, Tunnels, Underground railways.** See **RAILWAYS, Underground, Tunnels, Linings, Segments, Concrete, Precast**

**CONCRETE, Precast, Segments, Tunnels.** See **TUNNELS, Segments, Concrete, Precast**

**CONCRETE, Precast, Structures.** See **STRUCTURES, Concrete, Precast**

**CONCRETE, Precast, Technical colleges.** See **TECHNICAL COLLEGES, Concrete, Precast**

**CONCRETE, Precast, Transit sheds, Docks.** See **DOCKS, Sheds, Transit, Concrete, Precast**

**CONCRETE, Prefabricated building materials, Moulds, Steel**

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**CONCRETE, Prefabricated housing components.** See **HOUSING, Prefabrication, Components, Concrete**

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**CONCRETE, Prestressed, Beams.** See BEAMS, Concrete, Prestressed

**CONCRETE, Prestressed, Bridges.** See BRIDGES, Concrete, Prestressed

**CONCRETE, Prestressed, Buildings.** See BUILDINGS, Concrete, Prestressed

**CONCRETE, Prestressed, Frames, Structures.** See STRUCTURES, Frames, Concrete, Prestressed

**CONCRETE, Prestressed, Pressure vessels, Nuclear reactors.** See NUCLEAR REACTORS, Pressure vessels, Concrete, Prestressed

**CONCRETE, Prestressed, Tanks, Sludge digestion.** See SLUDGE, Digestion, Tanks, Concrete, Prestressed

**CONCRETE, Pretensioned, Hollow box beams, Underpasses.** See UNDERPASSES, Beams, Hollow box, Concrete, Pretensioned

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- Ready-mixed concrete. P. F. Warren. Contract J., 201 (8 Oct 64) p.735-6

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- Dockside ready-mixed concrete plant: description of a system, used by the Warner Company of Philadelphia, to ensure continuous aggregate supply. E. L. Hughes. Cement, Lime & Gravel, 39 (Oct 64) p.339-41. il.

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**CONTAINERS, Sugar. See SUGAR, Containers****CONTAINERS, Thermoplastics**

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Rotors, Gas turbines, Aircraft. See AIRCRAFT, Gas turbines, Rotors, Burst fragments, Shielding, Bullet containment theory

**CONTAMINATION, Chilled water, Cooling, Milk. See MILK, Cooling, Water, Chilled, Contamination****CONTINUOUS ANNEALING, Stainless steel strips. See STRIPS, Steel, Stainless, Annealing, Continuous****CONTINUOUS CAST STEEL. See STEEL, Cast, Continuous****CONTINUOUS CASTING, Aluminium. See ALUMINIUM, Casting, Continuous****CONTINUOUS CASTING, Aluminium, Strips. See STRIPS, Aluminium, Casting, Continuous****CONTINUOUS CASTING, Austenitic stainless steel. See**

STEEL, Stainless, Austenitic, Casting, Continuous

**CONTINUOUS CASTING, Copper. See COPPER, Casting, Continuous****CONTINUOUS CASTING, Copper, Rods. See RODS, Copper, Casting, Continuous****CONTINUOUS CASTING, Non-ferrous metals, Strips. See**

STRIPS, Non-ferrous metals, Casting, Continuous

**CONTINUOUS CASTING, Steel. See STEEL, Casting, Continuous****CONTINUOUS CASTING, Steel, Slabs. See SLABS, Steel, Casting, Continuous****CONTINUOUS CASTING, Steel, Tubes. See TUBES, Steel, Casting, Continuous****CONTINUOUS STEEL PRODUCTION. See STEEL, Production, Continuous****CONTINUOUS STATIONERY. See STATIONERY, Continuous****CONTINUOUS VERTICAL RETORTS, Town gas production. See GAS (Town) Production, Retorts, Continuous, Vertical****CONTINUOUS WAVE RADAR. See RADAR, Continuous wave****CONTOUR ETCHING, Low alloy steel. See STEEL, Low alloy, Contour etching****CONTOUR ENVELOPES, Charts, Instrument flying. See FLYING, Instrument, Charts, Contour envelopes****CONTRACTS, Building. See BUILDING, Contracts****CONTROL, Pneumatic, Remote, Engines, Landing crafts, Ships. See SHIPS, Landing crafts, Engines, Control, Pneumatic, Remote****CONTROL, Remote**

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- CONTROL, Remote, Stoppers, Ladles, Casting, Steel. See STEEL, Casting, Ladles, Stoppers, Control, Remote
- CONTROL, Remote, Town gas production. See GAS (Town) Production, Control, Remote
- CONTROL, Remote, Transmitters, Television. See TELEVISION, Transmitters, Control, Remote
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## CONTROL SYSTEMS

## Related Headings:

ACTUATORS  
CYBERNETICS  
FEEDBACK  
FEEDFORWARD  
GOVERNORS  
GUIDANCE SYSTEMS  
HALL GENERATORS  
POSITIONING CONTROL  
PROGRAMMERS  
SERVO VALVES  
SERVOMECHANISMS  
SWITCHES, Proximity  
SYNCHRO-RECEIVERS

## CONTROL SYSTEMS—SUBHEADINGS—Synopsis

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following*

Engineers  
Research  
Particular localities  
Great Britain  
Properties  
Reliability  
Stability  
Response  
Sensitivity  
Frequency response  
Time response  
Lag

Analysis  
Theory  
Pontrjagin's principle  
Mean squares  
Laqrangian multipliers  
Simulation  
Simulators  
Redundancy techniques

Components  
Instruments  
Alarms  
Annunciators  
Counters  
Computers  
Logical elements  
Amplifiers  
Pressure transducers  
Photoelectric cells

## Performance

## Kinds of control systems

Fluid  
Fluid jet  
Hydraulic  
Pneumatic  
Electro-hydraulic  
Ultrasonic

**CONTROL SYSTEMS—SUBHEADINGS—Synopsis—cont.**

Relay

End point

Adaptive

Hill climbing

Non-linear

Multi-loop

Multivariable

Discontinuous

Sampled data

## Applications

Mechanical engineering

Boilers

Internal combustion engines

Diesel engines

Mechanical handling

Lifts

Weighing machines

Machine tools

Lathes

Jig borers

Electrical engineering

Electrical machinery

Electric motors

Electric power systems

Alternators

Power stations

Nuclear power stations

Nuclear reactors

Transport

Railways

Ships

Warehouses

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**Boundary value problems, Solution, Computers, Analogue**

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**CONTROL SYSTEMS, Anodising, Aluminium. See ALUMINIUM, Anodising, Control systems****CONTROL SYSTEMS, Arc furnaces. See FURNACES, Arc, Control systems****CONTROL SYSTEMS, Arc furnaces, Steel production. See****STEEL, Production, Furnaces, Arc, Control systems****CONTROL SYSTEMS, Argon shielded arc welding, End seals,**

Cans, Fuel elements, Nuclear reactors. See NUCLEAR

REACTORS, Fuel elements, Cans, End seals, Welding,

Arc, Argon shielded, Control systems

**CONTROL SYSTEMS, Aromatic compound production, Petrochemicals. See AROMATIC COMPOUNDS, Petrochemicals, Production, Control systems****CONTROL SYSTEMS, Assembly, Machines. See ASSEMBLY, Machines, Control systems****CONTROL SYSTEMS, Automatics, Machine tools. See AUTOMATICS, Machine tools, Control systems****CONTROL SYSTEMS, Balancing, Rotors. See ROTORS, Balancing, Control systems****CONTROL SYSTEMS, Adaptive**

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**CONTROL SYSTEMS, Adaptive, Switching circuits,**

**Transistor**

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**CONTROL SYSTEMS, Aerials, Stations, Communication satellites. See SATELLITES, Artificial, Communication, Stations, Aerials, Control systems****CONTROL SYSTEMS, Air conditioning, Market buildings. See****MARKETS, Buildings, Air conditioning, Control systems****CONTROL SYSTEMS, Air transport. See AIR TRANSPORT, Control systems**



CONTROL SYSTEMS, Batch handling, Glass manufactures.

See GLASS, Manufactures, Batch handling, Control systems

CONTROL SYSTEMS, Batch mixing, Glass manufactures. See

GLASS, Manufactures, Batch mixing, Control systems

CONTROL SYSTEMS, Belt conveyors. See CONVEYORS,

Belt, Control systems

CONTROL SYSTEMS, Belt conveyors, Coal mining. See

COAL, Mining, Conveyors, Belt, Control systems

CONTROL SYSTEMS, Belt conveyors, Steel production. See

STEEL, Production, Conveyors, Belt, Control systems

CONTROL SYSTEMS, Bending machines, Pipes. See

PIPES, Bending, Machines, Control systems

CONTROL SYSTEMS, Blast furnaces. See FURNACES, Blast,

Control systems

CONTROL SYSTEMS, Blending, Malt. See MALT, Blending,

Control systems

CONTROL SYSTEMS, Blending, Petrol. See PETROL,

Blending, Control systems

CONTROL SYSTEMS, Blowdown, Boilers. See BOILERS,

Blowdown, Control systems

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CONTROL SYSTEMS, Boilers, Power stations. See POWER

STATIONS, Boilers, Control systems

CONTROL SYSTEMS, Boilers, Ships. See SHIPS, Boilers,

Control systems

CONTROL SYSTEMS, Boiling water reactors. See NUCLEAR

REACTORS, Boiling water, Control systems

CONTROL SYSTEMS, Boring machines. See BORING,

Machines, Control systems

CONTROL SYSTEMS, Boring machines, Excavator compon-

ents. See EXCAVATORS, Components, Boring, Machines, Control systems

CONTROL SYSTEMS, Braking, Trains. See TRAINS,

Braking, Control systems

CONTROL SYSTEMS, Brewing. See BREWING, Control sys-

tems

CONTROL SYSTEMS, Brick manufactures. See BRICKS,

Manufactures, Control systems

CONTROL SYSTEMS, Broaching machines. See BROACHING,

Machines, Control systems

CONTROL SYSTEMS, Bronze, Electroplating, Steel. See

STEEL, Electroplating, Bronze, Control systems

CONTROL SYSTEMS, Bunker conveyors, Coal mining. See

COAL, Mining, Conveyors, Bunker, Control systems

CONTROL SYSTEMS, Cake manufacture. See CAKE, Manu-

facture, Control systems

CONTROL SYSTEMS, Car parks. See CAR PARKS, Control

systems

CONTROL SYSTEMS, Carding, Wool. See WOOL, Carding,

Control systems

CONTROL SYSTEMS, Cargo ground handling, Air transport,

Freight. See FREIGHT, Transport, Air, Cargo ground handling, Control systems

CONTROL SYSTEMS, Cement kilns. See CEMENT, Kilns,

Control systems

CONTROL SYSTEMS, Centreless grinding machines. See

GRINDING, Centreless, Machines, Control systems

CONTROL SYSTEMS, Charging machines, Blast furnaces.

See FURNACES, Blast, Charging, Machines, Control systems

CONTROL SYSTEMS, Cheddaring machines, Cheese. See

CHEESE, Cheddaring, Machines, Control systems

CONTROL SYSTEMS, Cheese manufactures. See CHEESE,

Manufactures, Control systems

CONTROL SYSTEMS, Chemical conversion coating, Metals.

See METALS, Coating, Chemical conversion, Control systems

CONTROL SYSTEMS, Chemical engineering. See CHEMICAL ENGINEERING, Control systems

CONTROL SYSTEMS, Cleaning, Electroplating. See

ELECTROPLATING, Cleaning, Control systems

CONTROL SYSTEMS, Coal fired boilers, Heating, Houses.

See HOUSES, Heating, Boilers, Coal-fired, Control systems

CONTROL SYSTEMS, Coal-fired kilns, Bricks. See BRICKS,

Kilns, Coal-fired, Control systems

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STRIPS, Steel, Rolling, Cold, Control systems

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COPPER, Ores, Concentration, Control systems

CONTROL SYSTEMS, Continuous casting, Steel. See

STEEL, Casting, Continuous, Control systems

CONTROL SYSTEMS, Conveyors, Newspaper. See NEWS-

PRINT, Conveyors, Control systems

CONTROL SYSTEMS, Copying lathes. See LATHES, Copying,

Control systems

CONTROL SYSTEMS, Counters

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CONTROL SYSTEMS, Crushing, Rock. See ROCK, Crushing,

Control systems

CONTROL SYSTEMS, Cylindrical grinding, Motor car parts.

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CONTROL SYSTEMS, Die casting machines. See DIE

CASTING, Machines, Control systems

CONTROL SYSTEMS, Die sinking machines. See DIE

SINKING, Machines, Control systems

CONTROL SYSTEMS, Die sinking machines, Motor car parts.

See MOTOR CARS, Parts, Die sinking, Machines, Control systems

CONTROL SYSTEMS, Diesel engine alternators. See

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**CONTROL SYSTEMS, Digesters, Sulphate pulp.** See PULP, Sulphate, Digesters, Control systems

**CONTROL SYSTEMS, Distillation columns.** See DISTILLATION, Columns, Control systems

**CONTROL SYSTEMS, Drilling machines.** See DRILLING, Machines, Control systems

**CONTROL SYSTEMS, Drilling machines, Condensers, Refrigerators.** See REFRIGERATORS, Condensers, Drilling, Machines, Control systems

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## CORROSION

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CRYSTALS, Single, Aluminium. See ALUMINIUM, Crystals, Single

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- CRYSTALS**, Single, Silver, Electrodes. See ELECTRODES, Silver, Crystals, Single
- CRYSTALS**, Single, Silver chloride. See SILVER CHLORIDE, Crystals, Single
- CRYSTALS**, Single, Vacuum deposition, Gold films. See FILMS, Gold, Vacuum deposition, Crystals, Single
- CRYSTALS**, Single, Vacuum deposition, Silver films. See FILMS, Silver, Vacuum deposition, Crystals, Single
- CRYSTALS**, Single, Zinc. See ZINC, Crystals, Single
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- CRYSTALS, Spectroscopy, Raman**  
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- CRYSTALS**, Thorium dioxide. See THORIUM DIOXIDE, Crystals
- CUBA**  
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- CUCUMBERS, Greenhouses, Heating, Oil-fired**  
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- CULVERTS**, Canals. See CANALS, Culverts
- CUMARIN**. See COUMARIN
- CUMBERLAND**  
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- CUMBERNAULD**  
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- CUP ANEMOMETERS**. See ANEMOMETERS, Cup
- CUP-SPINDLE ASSEMBLIES**, Speedometers. See SPEEDOMETERS, Cup-Spindle assemblies
- CUP TESTS**, Drawing, Metals, Sheets. See SHEETS, Metals, Drawing, Cup tests
- CUPOLAS, Acid lined, Cold blast, Charging, Calcium carbide**  
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- CURCUMIN**, Reagents, Boron determination. See BORON, Determination, Reagents, Curcumin
- CURIE TEMPERATURE**, Oxidation, Iron. See IRON, Oxidation, Curie temperature
- CURING**, Adhesives, Joinery. See JOINERY, Adhesives, Curing
- CURING**, Adhesives, Lipping, Fibre board. See FIBRE BOARD, Lipping, Adhesives, Curing



**CURING, Adhesives, Wood furniture manufactures.** See FURNITURE, Wood, Manufactures, Adhesives, Curing

**CURING, Adhesives, Wood manufactures.** See WOOD, Manufactures, Adhesives, Curing

**CURING, Deferred, Crease resistance, Cotton fabrics, Clothing.** See CLOTHING, Fabrics, Cotton, Crease resistance, Curing, Deferred

**CURING, Dough moulding compounds, Polyesters.** See POLYESTERS, Dough moulding compounds, Curing

**CURING, Effect on strength, Concrete.** See CONCRETE, Strength, Effect of curing

**CURING, Moulding, Expanded polyurethane.** See POLYURETHANE, Expanded, Moulding, Curing

**CURING, Polyesters.** See POLYESTERS, Curing

**CURRENT, Circulating, Plasmas, Crossed field electron tube:** See ELECTRON TUBES, Crossed field, Plasmas, Current Circulating

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**CURRENT, Density variations, Hydrochloric acid solutions, Copper amalgam cathodes.** See CATHODES, Copper amalgam, Hydrochloric acid solutions, Current density variations

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**CURRENT, Dielectric, Cyclohexane.** See CYCLOHEXANE, Dielectric currents

**CURRENT, Dielectric, Hexane.** See HEXANE, Dielectric currents

**CURRENT, Distribution, Cylindrical porous electrodes.** See ELECTRODES, Porous, Cylindrical, Current distribution

**CURRENT, Distribution, Porous electrodes, Batteries.** See BATTERIES, Electrodes, Porous, Current distribution

**CURRENT, Distribution, Porous electrodes, Voltaic cells.** See CELLS, Voltaic, Electrodes, Porous, Current distribution

**CURRENT, Earth faults, Electric power systems.** See ELECTRIC POWER SYSTEMS, Current, Earth fault

**CURRENT, Effect on friction, Carbon brushes.** See BRUSHES, Carbon, Friction, Effect of current

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**CURRENT, Rectifiers.** See RECTIFIERS, Current

**CURRENT, Sequence, Electrical machinery protection.** See ELECTRICAL MACHINERY, Protection, Sequence current

**CURRENT, Space charge limited, Platinum coupled barium titanate.** See BARIUM TITANATE, Platinum coupled, Current, Space charge limited

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**CURRENT-VOLTAGE RELATION, Space charge, Drift region, Planar diodes.** See DIODES, Planar, Drift region, Space charge, Current-Voltage relation

**CURRENTS, Sea.** See SEA, Currents

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**CURTAIN COATING.** See SHEETS, Coating

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**CURTAIN WALLS, Office buildings.** See OFFICE BUILDINGS, Walls, Curtain

**CURTAIN WALLS, Trade union buildings.** See TRADE UNION BUILDINGS, Walls, Curtain

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**CUSHIONING, Platens, Tensile testing, Plaster.** See PLASTER, Tensile testing, Platens, Cushioning

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**CUT-OFF, Magnetrans.** See MAGNETRONS, Cut-off

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**CUT-OFF WAVELENGTH, T septate lunar line waveguides.** See WAVEGUIDES, Lunar line, T septate, Cut-off wavelength

**CUTLERY.** See EDGE TOOLS

**CUTTER-LOADERS**, Coal mining. See **COAL**, Mining,

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**CUTTING**

Related Headings:

EDGE TOOLS

SAWING

SECTIONING

SHEARING

**CUTTING**, Building stone. See **BUILDING**, Stone, Cutting

**CUTTING**, Coal mining. See **COAL**, Mining, Cutting

**CUTTING**, Concrete, Motorways. See **MOTORWAYS**, Concrete, Cutting

**CUTTING**, Concrete, Roads. See **ROADS**, Cutting, Concrete

**CUTTING**, Fabrics. See **FABRICS**, Cutting

**CUTTING**, Flame. See **FLAME CUTTING**

**CUTTING**, Knitwear fabrics. See **KNITWEAR**, Fabrics, Cutting

**CUTTING**, Linings, Bodies, Motor cars. See **MOTOR CARS**, Bodies, Linings, Cutting

**CUTTING**, Panels, Seats, Motor cars. See **MOTOR CARS**, Seats, Panels, Cutting

**CUTTING**, Paper. See **PAPER**, Cutting

**CUTTING**, Patterns, Shoe manufactures. See **SHOES**, Manufactures, Patterns, Cutting

**CUTTING**, Reinforced glass fibre plastics. See **PLASTICS**, Reinforced-Glass fibre, Cutting

**CUTTING**, Steel, Beams. See **BEAMS**, Steel, Cutting

**CUTTING**, Steel-Tellurium. See **STEEL-TELLURIUM**, Cutting

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**CYANIDES**, Effluents, Electroplating. See **ELECTROPLATING**, Effluents, Cyanide

**CYANIDES**, Effluents, Finishing, Metals. See **METALS**, Finishing, Effluents, Cyanides

**CYANITE**. See **KYANITE**

**CYANOCARBONS**

Related Headings:

TETRACYANOETHYLENE

**$\beta$ -CYANOETHYL ALCOHOLS**, Gas-liquid chromatography, Effect of hydrogen bond

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**CYBERNETICS**

Related Headings:

COMMUNICATION

**CYCLES**, Motor. See **MOTOR CYCLES**

CYCLIC COMPACTION, Powder metallurgy, Copper, Strips.  
See STRIPS, Copper, Powder metallurgy, Compaction, Cyclic

CYCLIC COMPACTION, Powder metallurgy, Stainless steel, Strips. See STRIPS, Steel, Stainless, Powder metallurgy, Compaction, Cyclic

CYCLIC COMPOUNDS

Related Headings:

2-AMINOBENZOTHAZOLE 3-OXIDE

ANILINE

AROMATIC COMPOUNDS

ASCORBIC ACID

BENZENE

BENZENECARBOXYLIC ACIDS

BENZENE HEXACHLORIDE

BENZENESULPHONYL GROUPS

BENZIL

BENZOCYCLOALKENES

BENZOTRIFLUORIDE

BENZOTRIFURAZAN

3,4-BENZOPYRENE

BENZYLDRYL CHLORIDE

BENZYLALKYLAMINES

BROMOBENZENE

BUTYLBENZENE

CHLOROBENZENE

CHLOROETHYLENE OXIDE

CHLOROGENIC ACID

CYCLOBUTANONE

CYCLOHEXANE

CYCLOHEXYLALKYLAMINES

CYCLOOCTYNE

CYCLOPENTADIENIDE

CYCLOPENTYL TOSYLATES

p-CYME

DIAZO COMPOUNDS, Photocopying

3,4:7,8-DIBENZOCYCLO[4.2.0]OCTA-3,7-DIENE

DICHLOROBENZOYL PEROXIDE

DICYCLOHEXYLAMINE

DIMETHYL-CYCLOHEXANONE

DIPHENYL PHENYLPHOSPHONATE

ETHYL BENZENE

FERROCENE

FUMARIC ACID

HETEROCYCLIC COMPOUNDS

HEXACHLOROCYCLOPENTADIENE

HYDROCARBONS

HYDROQUINONE

2-HYDROXY-2-PHENYLBUTYRIC ACID

INDENE

IONONES

ISOQUINOLIDINE

LACTONES

MERCAPTANS, Aromatic

METHYL DEHYDROEISOPROPYLABIETATE

3-METHYL-3-HYDROXYPHthalide

METHYLIONONES

4-METHYLTETRAHYDROPYRANS

NAPHTHALENE

NAPHTHENIC ACIDS

NITROBENZENE

NITROPHENYLAMINE

N-NITROSOTRIACETONAMINE

PHENOL

PHENYLAZOALKANES

PHENYLHYDROZONES

PHENYLMERCURY CHLORIDE

PHLOROGLUCINOL

PHthalimide

PICRIC ACID

PODOCARPIC ACID

## CYCLIC COMPOUNDS

Related Headings—cont.

POLYPYROMELLITIMIDE, Aromatic

POTASSIUM BENZOATE

PSEUDOCUMENE

PYRIMIDINES

SACCHARIN

STERIODS

STILBENEDIOL

TERPENES

TETRAPHENYL ETHYLENE

TOLUENE

TRICRESYL PHOSPHATE

XANTHONE

XANTHYDROL

XYLENES

## CYCLIC COMPOUNDS, Oxidation-Reduction, Electrolysis

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**CYTOCHROME**, Yeast. See **YEAST**, Cytochrome

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- DIELECTRIC CURRENTS, Benzene.** See **BENZENE, Dielectric currents**
- DIELECTRIC CURRENTS, Cyclohexane.** See **CYCLO-HEXANE, Dielectric currents**
- DIELECTRIC CURRENTS, Hexane.** See **HEXANE, Dielectric currents**
- DIELECTRIC DIODES.** See **DIODES, Dielectric**



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**DIELECTRIC DIODES**, Power measurement, Electrical noise. See NOISE, Electrical, Power measurement, Diodes, Dielectric

**DIELECTRIC HEATING**. See HEATING, Dielectric

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**DIELECTRICS**

Related Headings:

ELECTRIC STRENGTH

INSULATING MATERIALS, Electrical

INSULATING OILS

**DIELECTRICS**, Junctions, Waveguides. See WAVEGUIDES, Junctions, Dielectric

**DIELECTRICS**, Loaded waveguides. See WAVEGUIDES, Loaded, Dielectrics

**DIELECTRICS**, Solid, Switches. See SWITCHES, Solid dielectric

**DIELSDORF**

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**DIES**, Blanking. See BLANKING, Dies

**DIES**, Blow moulding, Polythene film. See FILM, Polythene, Moulding, Blow, Dies

**DIES**, Die casting, Zinc alloys. See ZINC, Alloys, Die casting, Dies

**DIES**, Die forging. See DIE FORGING, Dies

**DIES**, Drawing, Tubes. See TUBES, Drawing, Dies

**DIES**, Drop forging. See FORGING, Drop, Dies

**DIES**, Extruders, Plastics. See PLASTICS, Extruders, Dies

**DIES**, Extruders, Thermoplastics. See THERMOPLASTICS, Extruders, Dies

**DIES**, Inserts, Drop forging. See FORGING, Drop, Dies, Inserts

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**DIESEL-ELECTRIC LOCOMOTIVES**. See LOCOMOTIVES, Diesel-electric

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**DIESEL ENGINES—SUBHEADINGS—Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following

History  
Education

Problems  
Noise

Processes  
Combustion  
Exhaust  
Scavenging

Technical activities  
Manufactures  
Quality control  
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Parts  
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Fuel injection nozzles  
Fuel injection pumps  
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Control systems  
Governors  
Turbochargers

Feed materials  
Fuels  
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Lubricating oil

Kinds of diesel engines  
Air cooled  
Supercharged  
Turbo-compound  
Variable compression

Applications  
Generators, Electrical  
Alternators  
Nuclear power stations  
Motor vehicles  
Commercial vehicles  
Vans  
Buses  
Motor coaches  
Earth moving equipment  
Tractors  
Farm tractors  
Railway vehicles  
Locomotives  
Railcars  
Marine  
Ships  
Tankers  
Warships  
Motor boats  
Yachts

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#### DIFFUSION

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DRUMS, Cables, Barriers, Safety, Runways, Aerodromes. See AERODROMES, Runways, Safety, Barriers, Cables, Drums

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DRY CHLORINATION, Wool, Tops. See TOPS, Wool, Dry chlorination

DRY CLEANING. See CLEANING, Dry

DRY CLEANING, Foambacks, Clothing. See CLOTHING, Foambacks, Cleaning, Dry

DRY DOCKS. See DOCKS, Dry

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DRY OFFSET PRINTING. See PRINTING, Dry offset

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**DRYING**

Related Headings:

DEHUMIDIFICATION

DRYING, Air. See AIR DRYING

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DRYING, Grain. See GRAIN, Drying

DRYING, Grass. See GRASS, Drying

DRYING, Inks, Printing. See PRINTING, Inks, Drying



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DRYING, Lacquers, Finishing, Wood. See WOOD, Finishing, Lacquers, Drying

DRYING, Leather. See LEATHER, Drying

DRYING, Paint. See PAINT, Drying

DRYING, Papermaking. See PAPERMAKING, Drying

DRYING, Potatoes. See POTATOES, Drying

DRYING, Printing, Fabrics. See FABRICS, Printing, Drying

DRYING, Pulp production. See PULP, Production, Drying

DRYING, Spray, Alumina-Silica catalysts, Cracking, Refining, Petroleum. See PETROLEUM, Refining, Cracking, Catalysts, Alumina-Silica, Drying, Spray

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DRYING, Spray, China clay, Fillers, Paint. See PAINT, Fillers, China clay, Spray drying

DRYING, Spray, Pastes. See PASTES, Drying, Spray

DRYING, Spray, Powder manufactures, Technical ceramics. See CERAMICS, Technical, Powders, Manufactures, Drying, Spray

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**DUST, Shearers, Coal mining.** See **COAL, Mining, Shearers, Dust**

**DUST, Textile manufactures.** See **TEXTILES, Manufactures, Dust**

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**DYE REDUCTION TESTS**

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RESAZURIN TESTS

**DYED CELLULOSE ACETATE FABRICS, Colour television testing.** See **TELEVISION, Colour, Testing, Fabrics, Cellulose acetate, Dyed**

**DYED CELLULOSE ACETATE FIBRES.** See **CELLULOSE ACETATE, Fibres, Dyed**

**DYED COTTON FABRICS.** See **FABRICS, Cotton, Dyed**

**DYED FABRICS.** See **FABRICS, Dyed**

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**DYED NYLON FIBRES.** See **NYLON, Fibres, Dyed**

**DYED TERYLENE-WOOL, Tops.** See **TOPS, Terylene-Wool, Dyed**

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**DYEING, Cellulose acetate, Fabrics.** See **FABRICS, Cellulose acetate, Dyeing**

**DYEING, Cellulose acetate fibres.** See **CELLULOSE ACETATE, Fibres, Dyeing**

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**DYEING, Cellulosic fabrics.** See **FABRICS, Cellulosic, Dyeing**

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**DYEING, Cotton fabrics.** See **FABRICS, Cotton, Dyeing**

**DYEING, Cotton yarns.** See **YARNS, Cotton, Dyeing**

**DYEING, Education, Russia**

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**DYEING, Elastic polyurethane yarns.** See **YARNS, Polyurethane, Elastic, Dyeing**

**DYEING, Fabrics.** See **FABRICS, Dyeing**

**DYEING, Hanks, Man-made fibres, Carpets.** See **CARPETS, Man-made fibres, Hanks, Dyeing**

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**DYEING, Man-made fibres, Safety belts, Motor cars.** See **MOTOR CARS, Safety belts, Man-made fibres, Dyeing**

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DYEING, Narrow fabrics. See FABRICS, Narrow, Dyeing

DYEING, Nylon, Fabrics. See FABRICS, Nylon, Dyeing

DYEING, Nylon 6, Bed sheets. See BED SHEETS, Nylon 6, Dyeing

DYEING, Orlon. See ORLON, Dyeing

DYEING, Package, Cellulosic yarns. See YARNS, Cellulosic, Dyeing, Package

DYEING, Package, Elastic polyurethane yarns. See YARNS, Polyurethane, Elastic, Dyeing, Package

DYEING, Package, Yarns. See YARNS, Dyeing, Package

DYEING, Polyamide fibres. See POLYAMIDES, Fibres, Dyeing

DYEING, Polypropylene, Carpets. See CARPETS, Polypropylene, Dyeing

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DYEING, Solvent assisted, Wool. See WOOL, Dyeing, Solvent assisted

DYEING, Spinning, Nylon yarns. See YARNS, Nylon, Spinning, Dyeing

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DYEING, Textiles. See TEXTILES, Dyeing

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DYEING, Two-colour, Orlon. See ORLON, Dyeing, Two-colour

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DYEING, Wool, Hanks. See HANKS, Wool, Dyeing

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DYEING, Yams. See YARNS, Dyeing

## DYES

### Related Headings:

ANILINE

ANTHRAQUINONE DYES

AZO COMPOUNDS, Dyes

FLAVONES

NITROPHENYLAMINE

RHODAMINE B

DYES, Acid, Dyeing, Cellulose acetate fibres. See CELLULOSE ACETATE, Fibres, Dyeing, Dyes, Acid

DYES, Acid, Dyeing, Polyamides fibres. See POLYAMIDES, Fibres, Dyeing, Acid dyes

DYES, Acid, Powders, Hides. See HIDES, Powders, Dyes, Acid

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DYES, Reactive, Dyed fabrics. See FABRICS, Dyed, Reactive dyes

DYES, Reactive, Dyeing, Cellulose fibres. See

CELLULOSE, Fibres, Dyeing, Dyes, Reactive

DYES, Reactive, Dyeing, Cellulosic fabrics. See FABRICS, Cellulosic, Dyeing, Reactive dyes

DYES, Reactive, Dyeing, Cellulosic textiles. See TEXTILES, Cellulosic, Dyeing, Reactive dyes

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DYES, Reactive, Printing, Fabrics. See FABRICS, Printing, Reactive dyes

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DYES, Remazol, Dyeing, Fabrics. See FABRICS, Dyeing, Remazol dyes

DYES, Textiles. See TEXTILES, Dyes

DYES, Wool. See WOOL, Dyes

DYES, Wool, Felt, Hats. See HATS, Felt, Wool, Dyes

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**E.D.T.A.**, Complexometric analysis, Inorganic compound determination, Rubber. See **RUBBER**, Determination of inorganic compounds, Complexometric analysis, E.D.T.A.

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WATT-HOUR METERS  
WATTMETERS

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**ELECTRIC POWER SYSTEMS**

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POWER DISTRIBUTION

POWER STATIONS

POWER SUBSTATIONS

POWER TRANSMISSION

**ELECTRIC POWER SYSTEMS—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

**Particular countries**

*Great Britain*

*Scotland*

*Jersey*

*Russia*

*Asia*

*India*

*North America*

*Canada*

*Ontario*

*U.S.A.*

*Michigan*

*South America*

*British Guiana*

**Costs**

*Education*

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**ELECTRIC POWER SYSTEMS—SUBHEADINGS—**

*Synopsis—cont.*

*Problems*

*Safety*

*Faults*

*Stability*

*Current, Earth fault*

*Properties*

*Load*

*Load factor*

*Technical activities*

*Analysis*

*Design*

*Load control*

*Protection*

*Telemetry*

*Equipment*

*Control systems*

*Alarms*

*Communication systems*

*Electronic equipment*

*Insulators*

*Interconnections*

*Types of electric power systems*

*Rural*

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**ELECTRIC RAILWAYS. See RAILWAYS, Electric**

**ELECTRIC RAILWAYS, Interference, Communications engineering. See COMMUNICATIONS, Engineering, Interference, Railways, Electric**

**ELECTRIC RAILWAYS, Interference, Power transmission lines. See POWER TRANSMISSION LINES, Interference, Railways, Electric**

**ELECTRIC REACTORS, High voltage d.c. power transmission. See POWER TRANSMISSION, D.C., High voltage, Reactors, Electric**

**ELECTRIC SERVOMETERS. See SERVOMETERS, Electric**

**ELECTRIC SERVOMOTORS, Ratio transformers, Voltage stabilisers, Power transmission. See POWER TRANSMISSION, Voltage stabilisers, Transformers, Ratio, Servomotors, Electric**

**ELECTRIC SHOCK, Spark triggered arcs. See ARCS, Spark triggered, Electrodes, Electric shock**

**ELECTRIC STRENGTH, Liquid argon. See ARGON, Liquid, Electric strength**

**ELECTRIC STRENGTH, Liquid methane. See METHANE, Liquid, Electric strength**

**ELECTRIC STRESSES, Conducting surfaces, Parallel plane electrodes. See ELECTRODES, Plane, Parallel, Conducting surfaces, Electric stresses**

**ELECTRIC STRESSES, Gaseous cavities, Insulating materials, Parallel plane electrodes. See ELECTRODES, Plane, Parallel, Insulating materials, Gaseous cavities, Electric stresses**

**ELECTRIC SUSPENSION, Gyroscopes, Inertial navigation systems. See NAVIGATION SYSTEMS, Inertial, Gyroscopes, Suspension, Electric**

**ELECTRIC THROTTLE CONTROL, Turbojets, Military aircraft. See AIRCRAFT, Military, Turbojets, Throttle control, Electric**

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**ELECTRICAL CONDUCTIVITY, Alkali halides, Films. See FILMS, Alkali halides, Conductivity**

**ELECTRICAL CONDUCTIVITY, Aluminium films. See FILMS, Aluminium, Conductivity**

**ELECTRICAL CONDUCTIVITY, Argon, Plasmas, Magneto-hydrodynamic generators. See MAGNETOHYDRODYNAMICS, Generators, Plasmas, Argon, Conductivity**

**ELECTRICAL CONDUCTIVITY, Calcium aluminoborate glass. See GLASS, Calcium aluminoborate, Conductivity**

**ELECTRICAL CONDUCTIVITY, Calcium aluminosilicate glass. See GLASS, Calcium aluminosilicate, Conductivity**

**ELECTRICAL CONDUCTIVITY, Calcium oxide. See CALCIUM OXIDE, Electrical conductivity**

**ELECTRICAL CONDUCTIVITY, Fuels, Aircraft. See AIRCRAFT, Fuels, Electrical conductivity**

**ELECTRICAL CONDUCTIVITY, Helium, Plasmas, Magneto-hydrodynamic generators. See MAGNETOHYDRODYNAMICS, Generators, Plasmas, Helium, Conductivity**

**ELECTRICAL CONDUCTIVITY, Irradiated pyrolytic graphite. See GRAPHITE, Pyrolytic, Irradiated, Electrical conductivity**

**ELECTRICAL CONDUCTIVITY, Magnesium. See MAGNESIUM, Electrical conductivity**

**ELECTRICAL CONDUCTIVITY, Magnesium oxide. See MAGNESIUM OXIDE, Electrical conductivity**

**ELECTRICAL CONDUCTIVITY, Plastics coated fabrics. See FABRICS, Coated, Plastics, Electrical conductivity**

**ELECTRICAL CONDUCTIVITY, Potassium seeded flames. See FLAMES, Seeded (Potassium) Electrical conductivity**

**ELECTRICAL CONDUCTIVITY, Separation, Mineral dressing. See MINERAL DRESSING, Separation, Electrical conductivity**

**ELECTRICAL CONDUCTIVITY, Shock tube partial ionisation, Argon. See ARGON, Ionisation, Partial (Shock tubes) Electrical conductivity**

**ELECTRICAL CONDUCTIVITY, Silver azide. See SILVER AZIDE, Electrical conductivity**

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**ELECTRICAL DISCHARGE**

Related Headings:

ARCS

CORONA

GAS DISCHARGE

LIGHTNING

SPARK DISCHARGE

**ELECTRICAL DISCHARGE, Afterglows, Studies, Langmuir probes**

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- ELECTRICAL DISCHARGE, Insulation failure, Electric power system equipment. See ELECTRIC POWER SYSTEMS, Equipment, Insulation, Failure, Discharge
- ELECTRICAL DISCHARGE, Methane, Hydrocarbons production. See HYDROCARBONS, Production, Methane, Electrical discharge
- ELECTRICAL DISCHARGE, Toruses, Nuclear fusion. See NUCLEAR FUSION, Toruses, Electrical discharge
- ELECTRICAL DISTORTION. See DISTORTION, Electrical
- ELECTRICAL DOUBLE LAYER. See ELECTROLYSIS, Double layer
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**ELECTRICAL ENGINEERING**

## Related Headings:

A.C.  
 ADMITTANCE  
 BATTERY OPERATED  
 CAPACITANCE  
 CIRCUITS, Electric  
 COMMUNICATIONS, Engineering  
 CONDUCTANCE  
 CURRENT  
 D.C.  
 EARTHING  
 EDDY CURRENT  
 ELECTRIC  
 ELECTRICAL EQUIPMENT  
 ELECTRICAL INSTALLATIONS  
 ELECTRICAL MACHINERY  
 ELECTRICAL MEASUREMENT  
 ELECTROMAGNETIC  
 ELECTROMAGNETISM  
 ELECTRONICS  
 IMPEDANCE  
 INDUCTANCE  
 INDUCTION  
 MAGNETS  
 NETWORKS, Electrical  
 PHASE ANGLE  
 PIEZOELECTRICITY  
 POTENTIAL  
 POWER FACTOR  
 POWER PLANT

**ELECTRICAL ENGINEERING**

## Related Heading—cont.

POWER SUPPLIES  
 REACTANCE  
 RESISTANCE  
 RESISTIVITY  
 SPARK GAPS  
 SWITCHING  
 THERMOELECTRICITY  
 TRANSMISSION LINES  
 VOLTAGE

**ELECTRICAL ENGINEERING—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

*Fallacies**History**Particular countries*

*Great Britain*  
*West Germany*  
*Japan*  
*Malaysia*  
*Singapore*  
*North Borneo*

*Profession*

*Consultants*  
*Technicians*

*Education**Research**Mathematics**Components***ELECTRICAL ENGINEERING, Components**

## Related Headings:

BATTERIES  
 BUSBARS  
 CAPACITORS  
 CELLS, Leclanché  
 CONDUCTORS, Electrical  
 CONTACTS, Electrical  
 CONVERTERS  
 ELECTRODES  
 ELECTROMAGNETS  
 FUSE-SWITCHES  
 FUSES  
 IMPULSES, Voltage, Generators  
 INDUCTORS  
 INSULATORS  
 INVERTERS  
 MAGNETS  
 POTENTIOMETERS  
 RECTIFIERS  
 RESISTORS  
 SWITCHES  
 SWITCHGEAR  
 TRANSFORMERS  
 VACUUM, Gaps  
 WIRES, Insulated

**ELECTRICAL ENGINEERING, Components, Costs**

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HEARING AIDS

LOUDSPEAKERS

MICROPHONES

PUBLIC ADDRESS SYSTEMS

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SOUND, Recording

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SOUND FILMS

TRANSDUCERS, Electroacoustics

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Electroformed

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Nickel, Electroformed

ELECTROFORMING

Related Headings:

GRINDING, Electrolytic

ELECTROFORMING, Curved nickel foil. See FOIL, Nickel,

Curved, Electroforming

ELECTROFORMING, Metals. See METALS, Electroforming

ELECTROFORMING, Steel. See STEEL, Electroforming

ELECTRO-HYDRAULIC CONTROL SYSTEMS. See CONTROL SYSTEMS, Electro-hydraulic

ELECTRO-HYDRAULIC CONTROL SYSTEMS, Speed,

Welding, Steel, Frames, Blades, Bulldozers. See BULLDOZERS, Blades, Frames, Steel, Welding, Speed, Control systems, Electro-hydraulic

ELECTRO-HYDRAULIC CRANES. See CRANES, Electro-hydraulic

ELECTRO-HYDRAULIC CUTTING MACHINES, Knitwear fabrics. See KNITWEAR, Fabrics, Cutting, Machines, Electro-hydraulic

ELECTRO-HYDRAULIC DECORING, Castings. See CASTINGS, Decorating, Electro-hydraulic

ELECTRO-HYDRAULIC FORMING, Metals. See METALS, Forming, Electro-hydraulic

ELECTRO-HYDRAULIC SERVO VALVES. See SERVO VALVES, Electro-hydraulic

ELECTRO-HYDRAULIC SERVOMOTORS. See SERVOMOTORS, Electro-hydraulic

ELECTROKINETIC EFFECTS

Related Headings:

STREAMING POTENTIAL

ELECTROKINETICS, Low dielectric constant fluids. See

FLUIDS, Low dielectric constant, Electrokinetics

ELECTROLUMINESCENCE

Related Headings:

PHOSPHORS

ELECTROLUMINESCENCE, Zinc sulphide-Copper. See

ZINC SULPHIDE-COPPER, Electroluminescence

ELECTROLYSIS

Related Headings:

ACETONITRILE-POTASSIUM IODIDE, Electrolytes

ACIDS, Potentiometric titrations, Molten potassium nitrate

ALKALI-METAL HALIDES, Electrolytes

AMIDES, Electrolysis

AMMONIUM HALIDES, Electrolytes

ANODES, Aluminium, Boric acid-Formamide solutions

ANODES, Cadmium amalgam, Oxidation

ANODES, Carbon, Activated, Sulphuric acid electrolytes

ANODES, Carbon, Molten silver chloride electrolytes

ANODES, Carbon monoxide-Platinum, Solid zirconia-lime electrolytes

ANODES, Copper, Polishing, Phosphoric acid electrolytes

ANODES, Copper, Rotating disc, Hydrochloric acid

ANODES, Gallium, Liquid, Alkaline solutions

ANODES, Gallium, Liquid, Dissolution, Electrolysis

ANODES, Gallium, Liquid, Hydrochloric acid-Potassium chloride solutions

ANODES, Gold, Rotating disc, Hydrochloric acid, Passivation

ANODES, Hafnium, Hydrofluoric acid electrolytes

ANODES, Iridium, Hydrochloric acid electrolytes

ANODES, Iron, Hydrochloric acid solutions

ANODES, Lead, Oxidised, Sulphuric acid solutions

ANODES, Lead, Salt solutions

ANODES, Nickel, Hydrochloric acid solutions

ANODES, Platinum, Alcohol oxidation, Electrolysis

ANODES, Platinum, Aldehyde oxidation, Electrolysis

ELECTROLYSIS

Related Headings-cont.

ANODES, Platinum, Hydrochloric acid-Sulphuric acid solutions

ANODES, Platinum, Molten silver nitrate electrolytes

ANODES, Platinum, Perchloric acid solutions

ANODES, Platinum, Platinised, Hydrochloric acid-Perchloric acid solutions

ANODES, Platinum, Platinised, Oxalic acid oxidation, Electrolysis

ANODES, Platinum, Platinised, Phosphoric acid-Perchloric acid solutions

ANODES, Platinum, Rotating, Organic electrolytes

ANODES, Precious metals, Molten alkali carbonates

ANODES, Rhodium, Hydrochloric acid solutions

ANODES, Silicon, Alkaline solutions

ANODES, Steel, Stainless

ANODES, Steel, Stainless, Molten alkali carbonates

ANODES, Steel, Stainless, Sulphuric acid solutions

ANODES, Tin, Caustic soda electrolytes

ANODES, Zinc, Sodium bicarbonate solutions

ANODES, Zinc, Sodium carbonate solutions

ANODES, Zirconium, Oxide films, Formation

BENZONITRILE-HYDROGEN BROMIDE, Electrolytes

CATHODES, Brass amalgam, Rotating, Aromatic aldehyde electrolytes

CATHODES, Carbon (Oxygen reduction)

CATHODES, Carbon, Rotating disc, Potassium hydroxide, Hydrogen peroxide solutions

CATHODES, Chloride electrolytes

CATHODES, Cobalt, Hydrogen overvoltage

CATHODES, Copper amalgam, Hydrochloric acid solutions

CATHODES, Graphite, Nitric acid solutions

CATHODES, Hydrogen evolution

CATHODES, Mercury, Double layer

CATHODES, Mercury, Ethyl dodecyl sulphoxide adsorption

CATHODES, Mercury, Organic chemicals solutions

CATHODES, Mercury, Potential barrier, Electrolysis

CATHODES, Nickel, Nickel sulphate-Potassium sulphate solutions

CATHODES, Nickel, Sulphuric acid-Thiourea solutions

CATHODES, Platinum, Molten cryolite solutions

CATHODES, Platinum, Molten potassium difluoride electrolytes

CATHODES, Platinum, Perchloric acid solutions

CATHODES, Platinum, Single crystal, Spherical, Nitric acid solutions

CATHODES, Potassium hydroxide solutions

CATHODES, Silver, Molten silver nitrate electrolytes

CATHODES, Steel, Stainless, Tubular, Copper deposition, Flowing electrolytes

CELLS, Voltaic, Electrodes, Silver-Silver chloride, Hydrochloric acid-Organic acids solutions

CORROSION, Studies, Electrolysis cells

ELECTRODEPOSITION

ELECTRODES, Aluminium, Molten potassium difluoride

ELECTRODES, Amalgam, Crystals, Growth, Electrolysis

ELECTRODES, Cobalt, Beta, Sulphuric acid electrolytes

ELECTRODES, Cobalt hydroxide, Electrolysis

ELECTRODES, Copper, Alkaline solutions

ELECTRODES, Copper, Sulphuric acid solutions

ELECTRODES, Glass, Ammonium ion responsive

ELECTRODES, Glass, Potassium ion responsive

ELECTRODES, Gold, Sodium sulphate solutions

ELECTRODES, Graphite, Hydrogen overvoltage

ELECTRODES, Graphite, Porous, Hydrochloric acid solutions

ELECTRODES, Kinetics

ELECTRODES (Low polarisation)



## ELECTROLYSIS

Related Headings—cont.

- ELECTRODES, Manganese, Acid solutions
- ELECTRODES, Manganese-Manganese ion, Sulphuric acid-Potassium sulphate solutions
- ELECTRODES, Mercury, Aliphatic compound adsorption
- ELECTRODES, Mercury, Aqueous solutions
- ELECTRODES, Mercury, Sodium salt solutions
- ELECTRODES, Metals, Molten alkali-metal halides, Electrocapillarity (Double layer)
- ELECTRODES, Nickel, Rotating disc, Coumarin electrolytes
- ELECTRODES, Nickel, Vertical, Ferricyanide-Ferrocyanide solutions
- ELECTRODES, Platinum, Aqueous solutions
- ELECTRODES, Platinum, Formic acid depolarisers
- ELECTRODES, Platinum, Molten sodium nitrate electrolytes
- ELECTRODES, Platinum, Perchloric acid solutions, Halide ion adsorption, Electrolysis
- ELECTRODES, Platinum-Oxygen, Potassium hydroxide electrolytes
- ELECTRODES, Porous, Circulating electrolytes
- ELECTRODES, Porous, Electrolysis
- ELECTRODES, Potential
- ELECTRODES, Precious metals, Formic acid electrolytes
- ELECTRODES, Precious metals, Perchloric acid solutions, Methanol adsorption, Electrolysis
- ELECTRODES, Reference
- ELECTRODES, Reference, Platinum, Platinised, Hydrogen, Adsorption, Raney nickel catalysts
- ELECTRODES, Silver, Crystals, Single, Electrolysis
- ELECTRODES, Thermal coefficients, Electrolysis
- ELECTRODES, Tubular, Flowing electrolytes
- ELECTRODES, Zinc amalgam, Electrolysis
- ELECTROFORMING
- GALVANOSTALAMETRY
- HYDROCARBONS, Aromatic, Electrolytes
- NITRO-AROMATIC COMPOUNDS, Electrolytes
- POTENTIOSTATS
- ELECTROLYSIS, Brine, Chlorine production. See CHLORINE, Production, Brine, Electrolysis
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- ELECTROLYSIS, Oxygen effect studies, Xanthates, Collectors, Flotation, Galena. See GALENA, Flotation, Collectors, Xanthates, Effect of oxygen, Studies, Electrolysis
- ELECTROLYSIS, Salt, Chlorate production. See CHLORATES, Production, Salt, Electrolysis
- ELECTROLYSIS, Silver recovery, Fixing baths, Processing, Photography. See PHOTOGRAPHY, Processing, Fixing baths, Silver, Recovery, Electrolysis
- ELECTROLYSIS, Steel production. See STEEL, Production, Electrolysis
- ELECTROLYTES, Flowing, Tubular electrodes. See ELECTRODES, Tubular, Flowing electrolytes
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- ELECTROLYTIC HYGROMETERS, Oxide determination, Lead. See LEAD, Determination of oxide, Electrolytic hygrometers
- ELECTROLYTIC POLISHING, Electron microscopy specimens, Beryllium. See BERYLLIUM, Microscopy, Electron, Specimens, Polishing, Electrolytic
- ELECTROLYTIC POLISHING, Metallography specimens. See METALLOGRAPHY, Specimens, Polishing, Electrolytic
- ELECTROLYTIC POLISHING, Transmission electron microscopy, Metal foil. See FOIL, Metal (Microscopy, Electron, Transmission) Electropolishing
- ELECTROLYTIC SCALE REMOVAL, Steel. See STEEL, Scale, Removal, Electrolytic
- ELECTROLYTIC TANK MODELS, Simulation, Laplacian fields. See LAPLACIAN FIELDS, Simulation, Electrolytic tank models
- ELECTROLYTIC TANK MODELS, Space charge. See SPACE CHARGE, Electrolytic tank models
- ELECTROLYTIC TANK PLOTTERS, Simulators, Fluid flow. See FLUIDS, Flow, Simulation, Electrolytic tank plotters
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- ELECTROMAGNETIC BRAKES, Motor cars. See MOTOR CARS, Brakes, Electromagnetic
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- ELECTROMAGNETIC PUMPS, Liquid metals. See METALS, Liquid, Pumps, Electromagnetic
- ELECTROMAGNETIC STIRRING, Arc furnaces, Melting, Stainless steel. See STEEL, Stainless, Melting, Furnaces, Arc, Stirring, Electromagnetic
- ELECTROMAGNETIC THEORY, Electrical machinery. See ELECTRICAL MACHINERY, Electromagnetic theory

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- ELECTRON DIFFRACTION, Cold worked chromium foil. See FOIL, Chromium, Cold worked, Electron diffraction
- ELECTRON DIFFRACTION, Dislocation studies, Iron, Foil. See FOIL, Iron, Dislocations, Studies, Electron diffraction
- ELECTRON DIFFRACTION, Precipitates, Hardening, Metals. See METALS, Hardening, Precipitates, Electron diffraction
- ELECTRON DIFFRACTION, Stainless steel. See STEEL, Stainless, Electron diffraction
- ELECTRON DIFFRACTION, Vacuum deposited metal films. See FILMS, Metal, Vacuum deposited, Electron diffraction
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- ELECTRON MICROSCOPES. See MICROSCOPES, Electron
- ELECTRON MICROSCOPY. See MICROSCOPY, Electron
- ELECTRON MICROSCOPY, Aleurone, Barley. See BARLEY, Aleurone, Microscopy, Electron
- ELECTRON MICROSCOPY, Alumina, Whiskers. See WHISKERS, Alumina, Microscopy, Electron
- ELECTRON MICROSCOPY, Barium coated nickel thermionic cathode studies. See CATHODES, Thermionic, Nickel, Barium coated, Studies, Electron microscopy
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- ELECTRON MICROSCOPY, Beryllium. See BERYLLIUM, Microscopy, Electron
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- ELECTRON MICROSCOPY, Calcium tungstate. See CALCIUM TUNGSTATE, Electron microscopy
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- ELECTRON MICROSCOPY, Cobalt foil. See FOIL, Cobalt, Microscopy, Electron
- ELECTRON MICROSCOPY, Colloid effect on silver bromide, Emulsions, Photography. See PHOTOGRAPHY, Emulsions, Silver bromide, Effect of colloids, Studies, Electron microscopy
- ELECTRON MICROSCOPY, Copper, Electroplate. See ELECTROPLATE, Copper, Electron microscopy
- ELECTRON MICROSCOPY, Crystal defect studies, Semiconductor diodes. See DIODES, Semiconductors, Crystal defects, Studies, Microscopy, Electron
- ELECTRON MICROSCOPY, Crystals, Paraformaldehyde. See PARAFORMALDEHYDE, Crystals, Microscopy, Electron
- ELECTRON MICROSCOPY, Crystals, Polymethylpentene. See POLYMETHYLPENTENE, Crystals, Microscopy, Electron
- ELECTRON MICROSCOPY, Dislocations, Crystals, Metals, Films. See FILMS, Metal, Crystals, Dislocations, Electron microscopy
- ELECTRON MICROSCOPY, Dislocations, Single crystals, Aluminium. See ALUMINIUM, Crystals, Single, Dislocations, Studies, Electron microscopy
- ELECTRON MICROSCOPY, Dislocations, Stainless steel foil. See FOIL, Steel, Stainless, Dislocations, Studies, Microscopy, Electron
- ELECTRON MICROSCOPY, Domain wall studies, Magnetic films. See FILMS, Magnetic, Domains, Walls, Studies, Electron microscopy
- ELECTRON MICROSCOPY, Edges, Cobalt films. See FILMS, Cobalt, Edges, Microscopy, Electron
- ELECTRON MICROSCOPY, Fatigue studies, Single crystals, Aluminium-magnesium. See ALUMINIUM-MAGNESIUM, Crystals, Single, Fatigue, Studies, Electron microscopy
- ELECTRON MICROSCOPY, Glass, Electrodes. See ELECTRODES, Glass, Microscopy, Electron
- ELECTRON MICROSCOPY, Glass, Foil. See FOIL, Glass, Electron microscopy
- ELECTRON MICROSCOPY, Growth studies, Neutrons irradiated, Single crystals, Magnesium oxide. See MAGNESIUM OXIDE, Crystals, Single, Irradiated (Neutrons) Growth studies, Electron microscopy
- ELECTRON MICROSCOPY, Hot torsion studies, Aluminium, Foil. See FOIL, Aluminium, Torsion, Hot, Studies, Electron microscopy
- ELECTRON MICROSCOPY, Hot torsion studies, Copper, Foil. See FOIL, Copper, Torsion, Hot, Studies, Electron microscopy
- ELECTRON MICROSCOPY, Hot torsion studies, Nickel, Foil. See FOIL, Nickel, Torsion, Hot, Studies, Electron microscopy
- ELECTRON MICROSCOPY, Hydrogen sulphide, Tamishing, Thermally etched silver films. See FILMS, Silver, Thermally etched, Tamishing, Hydrogen sulphide, Microscopy, Electron
- ELECTRON MICROSCOPY, Loops, Dislocations, Interactions with dislocations, Crystals, Metals. See METALS, Crystals, Dislocations, Interactions with loops, Studies, Electron microscopy
- ELECTRON MICROSCOPY, Loops, Dislocations, Single crystals, Copper. See COPPER, Crystals, Single, Dislocations, Loops, Electron microscopy
- ELECTRON MICROSCOPY, Loops, Dislocations studies, Single crystals, Magnesium oxide. See MAGNESIUM OXIDE, Crystals, Single, Dislocations, Loops, Studies, Electron microscopy
- ELECTRON MICROSCOPY, Metal foil. See FOIL, Metal, Microscopy, Electron
- ELECTRON MICROSCOPY, Microfibrils, Cellulose. See CELLULOSE, Microfibrils, Electron microscopy
- ELECTRON MICROSCOPY, Nickel foil. See FOIL, Nickel, Microscopy, Electron
- ELECTRON MICROSCOPY, Nodes, Dislocations, Gold-Tin. See GOLD-TIN, Dislocations, Nodes, Studies, Microscopy, Electron
- ELECTRON MICROSCOPY, Precipitates, Hardening, Metals. See METALS, Hardening, Precipitates, Microscopy, Electron
- ELECTRON MICROSCOPY, Silicon precipitate studies, Nickel-Chromium-Steel. See STEEL-CHROMIUM-NICKEL, Precipitates, Silicon, Studies, Electron microscopy
- ELECTRON MICROSCOPY, Single crystals, Vacuum deposition, Gold films. See FILMS, Gold, Vacuum deposition, Crystals, Single, Microscopy, Electron
- ELECTRON MICROSCOPY, Single crystals, Vacuum deposition, Silver films. See FILMS, Silver, Vacuum deposition, Crystals, Single, Microscopy, Electron
- ELECTRON MICROSCOPY, Stacking faults, Crystals, Cobalt. See COBALT, Crystals, Stacking faults, Microscopy, Electron
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- ELECTRON MICROSCOPY, Tracks, Helium-3 ions, Molybdenum trioxide. See MOLYBDENUM TRIOXIDE, Crystals, Irradiation, Helium-3 ions, Microscopy, Electron



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- ELECTRON MICROSCOPY**, Uranium dioxide. See **URANIUM DIOXIDE**, Microscopy, Electron
- ELECTRON OPTICS**, Instruments, Vacuum, Seals, "O" rings  
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DIODES  
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THYRATRONS  
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IMAGE INTENSIFIERS

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METALS, Composite, Electronic engineering

PLASTICS, Electronic engineering

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**ELECTRONS, Attachment, Bromobenzene.** See **BROMOBENZENE, Electron attachment**

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**ELECTRONS, Backscatter, Aluminium, Films.** See **FILMS, Aluminium, Electron backscatter**

**ELECTRONS, Backscatter, Gold, Films.** See **FILMS, Gold, Electron backscatter**

**ELECTRONS, Bombardment, Effect on electrical conductivity, Alkali halides, Films.** See **FILMS, Alkali halides, Conductivity, Effect of electron bombardment**

**ELECTRONS, Bombardment, Vacuum deposited silicones, Films.** See **FILMS, Silicones, Vacuum deposited (Electron bombardment)**

**ELECTRONS, Bombardment, Vacuum deposition, Iron-Nickel films.** See **FILMS, Iron-Nickel, Vacuum deposition, Electron bombardment**

**ELECTRONS, Capture, Detectors, Gas chromatography.** See **GAS CHROMATOGRAPHY, Detectors, Electron capture**

**ELECTRONS, Collision, Ionosphere.** See **IONOSPHERE, Electron collision**

**ELECTRONS, Deflection, Free magnetic poles (Electron microscopy) Edges, Cobalt films.** See **FILMS, Cobalt, Edges (Microscopy, Electron) Free magnetic poles, Electron deflection**

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**ELECTRONS, Paired, Stereochemistry.** See **STEREOCHEMISTRY, Electrons, Lone pairs**

**ELECTRONS, Recombination with ions, Afterglows, Gas discharge, Ammonia-Helium.** See **AMMONIA-HELIUM, Gas discharge, Afterglows, Electron-ion recombination coefficients**

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**ELECTRONS, Traps, Cadmium sulphide.** See **CADMIUM SULPHIDE, Electron traps**

**ELECTRONS, Traps, Crystals, Organic chemicals.** See **ORGANIC CHEMICALS, Crystals, Electron traps**

**ELECTRO-OPTICS**

Related Headings:

KERR CELLS

**ELECTROPHILIC COMPOUNDS, Initiators, Polymerisation, Polyvinyl carbazole production.** See **POLYVINYL CARBAZOLE, Production, Polymerisation, Initiators, Electrophilic compounds**

**ELECTROPHORESIS**

Related Headings:

IMMUNOELECTROPHORESIS

**ELECTROPHORESIS, Aluminising, Steel.** See **STEEL, Aluminising, Electrophoretic**

**ELECTROPHORESIS, Ceramic coatings.** See **COATINGS, Ceramics, Electrophoresis**

**ELECTROPHORESIS, Coating.** See **COATING, Electrophoresis**

**ELECTROPHORESIS, Painting.** See **PAINTING, Electrophoresis**

**ELECTROPHORESIS, Painting, Bodies, Motor cars.** See **MOTOR CARS, Bodies, Painting, Electrophoresis**

**ELECTROPHORESIS, Painting, Cooker components.** See **COOKERS, Components, Painting, Electrophoresis**

**ELECTROPHORESIS, Painting, Motor car parts.** See **MOTOR CARS, Parts, Painting, Electrophoresis**

**ELECTROPHORESIS, Painting, Washing machine components.** See **WASHING MACHINES, Components, Painting, Electrophoresis**

**ELECTROPHORESIS, Protein, Flour.** See **FLOUR, Protein, Electrophoresis**

**ELECTROPHORESIS, Starch-gel.** See **FLOUR, Protein, Electrophoresis, Starch-gel**

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**ELECTROPLATE, Thickness, Testing, Stripping cells,**

End point, Determination, Impedance changes

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**ELECTROPLATING**

Related Headings:

BARREL PLATING

ELECTRODEPOSITION

**ELECTROPLATING-SUBHEADINGS-Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

**Chemistry****Technical activities & problems**

*Design*  
*Cleaning*  
*Effluents*

**Materials**

*Solutions*

**Plant**

*Jigs*  
*Tanks*  
*Control systems*  
*Rectifiers*  
*Current stabilisers*  
*Voltage stabilisers*

**Deposit of particular metals**

*Alloys*  
*Bronze*  
*Chromium*  
*Cobalt*  
*Cobalt-Copper-Nickel*  
*Indium*

*Nickel*

*Nickel-Chromium*

*Nickel-Tin alloy*

*Precious metals*

*Gold*

*Rhodium*

*Tin*

**ELECTROPLATING, Acrylonitrile-Butadiene-Styrene. See ACRYLONITRILE-BUTADIENE-STYRENE, Electroplating**

**ELECTROPLATING, Alloys**

Alloy deposition: theory, practice and current applications, pt.1. N. V. Korovin. *Electroplating & Metal Finishing*, 17 (Apr 64) p.117-21. il. refs.

Alloy deposition: theory, practice and current applications, pt.2. N. V. Korovin. *Electroplating & Metal Finishing*, 17 (May 64) p.151-6. refs.

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**ELECTROPLATING, Bicycle components. See BICYCLES, Components, Electroplating**

**ELECTROPLATING, Brass. See BRASS, Electroplating**  
**ELECTROPLATING, Brass, Motor car parts. See MOTOR CARS, Parts, Brass, Electroplating**

**ELECTROPLATING, Bronze**

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**ELECTROPLATING, Bumpers, Motor cars. See MOTOR CARS, Bumpers, Electroplating**

**ELECTROPLATING, Chemistry, Analysis**

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**ELECTROPLATING, Chromium**

"Automatic hard chromium plating" (summary). S. H. Grinrod. *Industrial Finishing*, 16 (Jan 64) p.41-2

Shielding and stopping-off in hard chromium plating. J. D. Greenwood. *Electroplating & Metal Finishing*, 17 (Apr 64) p.111-16. il.

**ELECTROPLATING, Cleaning**

New one-stage cleaner for plating [ChemiClene 785] Product Finishing, 17 (Aug 64) p.74+

**ELECTROPLATING, Cleaning, Control systems**

Automatic cleaning for trade plater [Glydo] Product Finishing, 17 (Jun 64) p.61-3. il.

**ELECTROPLATING, Cobalt-Copper-Nickel, Pyrophosphate solutions**

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**ELECTROPLATING, Copper substrates.** See **COPPER, Electroplating**

**ELECTROPLATING, Current stabilisers**

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New system of constant current control [Autola-Galvanomat] *Electroplating & Metal Finishing*, 17 (Oct 64) p.366-7. il.

**ELECTROPLATING, Dental equipment.** See **DENTAL EQUIPMENT, Electroplating**

**ELECTROPLATING, Design**

Electroplating and design. *Light Production Engng.*, 2 (Apr 64) p.4-7. il.

**ELECTROPLATING, Die castings.** See **DIE CASTINGS, Electroplating**

**ELECTROPLATING, Die castings, Zinc alloys.** See **ZINC, Alloys, Die castings, Electroplating**

**ELECTROPLATING, Effluents, Analysis**

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**ELECTROPLATING, Effluents, Cyanide, Recovery**

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**ELECTROPLATING, Effluents, Filtration**

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**ELECTROPLATING, Effluents, Treatment**

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**ELECTROPLATING, Gold**

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**ELECTROPLATING, Jigs**

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**ELECTROPLATING, Magnesium.** See **MAGNESIUM, Electroplating**

**ELECTROPLATING, Materials, Costs**

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**ELECTROPLATING, Mild steel.** See **STEEL, Mild, Electroplating**

**ELECTROPLATING, Motor car parts.** See **MOTOR CARS, Parts, Electroplating**

**ELECTROPLATING, Needles, Sewing.** See **SEWING, Needles, Electroplating**

**ELECTROPLATING, Nickel**

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**ELECTROPLATING, Nickel, Anodes, Baskets, Titanium**

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**ELECTROPLATING, Nickel, Black**

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Impurities in electrodeposited nickel. R. D. Srivastava & H. Gesser. *Electrochimica Acta*, 9 (Nov 64) p.1405-10. refs.

**ELECTROPLATING, Nickel, Solutions, Determination of cobalt, Spectrophotometry**

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**ELECTROPLATING, Nickel, Solutions, Determination of nickel, Spectrophotometry**

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**ELECTROPLATING, Nickel, Solutions, Determination of Saccharin**

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**ELECTROPLATING, Nickel, Stampers, Discs, Sound records.** See **DISCS, Sound records, Stampers, Electroplating, Nickel**

**ELECTROPLATING, Nickel—Chromium**

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*Electroplating & Metal Finishing*, 17 (Mar 64) p.74-7. il.

**ELECTROPLATING, Reclamation, Diesel engine components, Ships.** See SHIPS, Diesel engines, Components, Reclamation, Electroplating**ELECTROPLATING, Rectifiers**

Development and use of rectifiers (summary) J. E. Garside.

*Industrial Finishing*, 16 (Nov 64) p.41-2. il.

Latest developments in plating rectifiers. P. J. H. Gunton. *Electroplating & Metal Finishing*, 17 (Dec 64) p.412+. il.

**ELECTROPLATING, Rhodium, Masking paint**

Stress in electrodeposited rhodium: new masking paint reduces need for carbon treatment. *Electroplating & Metal Finishing*, 17 (May 64) p.157

**ELECTROPLATING, Rhodium, Solutions, Determination of rhodium**

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**ELECTROSLAG WELDING, Submarine bulkheads.** See SUBMARINES, Bulkheads, Welding, Electrosag

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**ELECTROSTATIC COPYING.** See COPYING, Electrostatic

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- ELECTROSTATIC SPRAYING, Paint, Bodies, Motor cars.** See MOTOR CARS, Bodies, Paint, Spraying, Electrostatic
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- ELECTROSTATIC SPRAYING, Water thinned paint.** See PAINT, Water thinned, Spraying, Electrostatic
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- ELLIPTICAL PENDULUMS, Non-linear vibration studies.** See VIBRATIONS, Non-linear, Studies, Pendulums, Elliptical
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- EMBRITTLMENT, Molybdenum-Chromium-Steel, Plates, Pressure vessels, Nuclear reactors.** See NUCLEAR REACTORS, Pressure vessels, Plates, Steel-Chromium-Molybdenum, Embrittlement
- EMBRITTLMENT, Steel.** See STEEL, Embrittlement
- EMBRITTLMENT, Stress relieving, Steel-Chromium-Molybdenum-Vanadium, Steam plant, Power stations.** See POWER STATIONS, Steam plant, Steel-Chromium-Molybdenum-Vanadium, Stress relieving, Embrittlement
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- EMISSION SPECTROSCOPY, Malleable iron.** See IRON, Malleable, Spectroscopy, Emission
- EMISSION SPECTROSCOPY, Sinter, Iron ores.** See IRON, Ores, Sinter, Spectroscopy, Emission
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- EMISSIVITY, Stainless steel cans, Fuel elements, Nuclear reactors.** See NUCLEAR REACTORS, Fuel elements, Cans, Steel, Stainless, Emissivity
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- EMULSIFIERS, Dithiol, Tin determination, Canned food.** See FOOD, Canned, Determination of tin, Dithiol, Emulsifiers
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## ENGINEERING

Related Headings:

ASTRONAUTICS  
CONTROL SYSTEMS  
DRAINAGE  
MINING  
RAILWAYS  
ROADS  
SHIPBUILDING  
SYSTEMS, Engineering  
TOLERANCES  
TRANSPORT  
WATER, Engineering

## ENGINEERING—SUBHEADINGS—Synopsis

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

### History

Particular countries  
Great Britain  
Coventry  
Scotland  
Clyde Valley  
Northern Ireland  
Europe  
Czechoslovakia  
Middle East

### Organisations

Profession  
Vocational guidance  
Manpower  
Consultants  
Technicians

### Education

Teaching  
Dip Tech.  
Research  
Specifications

### Mathematics

Statistical mathematics  
Computers

### Physics

Thermodynamics  
Design

### Drawing

### Quality control

## ENGINEERING—SUBHEADINGS—Synopsis—cont.

## Materials

## Plant

## Products

ENGINEERING, Aeronautical. See AIRCRAFT

ENGINEERING, Chemical. See CHEMICAL ENGINEERING

ENGINEERING, Civil. See CIVIL ENGINEERING

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- PLASTICS, Engineering
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- POLYCARBONATE RESINS, Engineering materials
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COMBUSTION CHAMBERS

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*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

**Components**

*Couplings*

*Magnetic wheels*

**Types**

*Internal combustion*

*Hypergolic*

*Rotary*

*By fuel*

*Dual fuel*

*Multifuel*

**Applications**

*Rockets*

*Vehicles*

*Aircraft*

*Ships*

*Warships*

*Fishing vessels*

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- EXTRUSION, Hot, Powder metallurgy. See POWDER METALLURGY, Extrusion, Hot
- EXTRUSION, Hot, Steel. See STEEL, Extrusion, Hot
- EXTRUSION, Impact, Billets. See BILLETS, Extrusion, Impact
- EXTRUSION, Impact, Magnesium-Lithium, Containers, Microminiature circuits, Vehicles, Astronautics. See ASTRONAUTICS, Vehicles, Circuits, Microminiature, Containers, Magnesium-Lithium, Extrusion, Impact
- EXTRUSION, Impact, Metals. See METALS, Extrusion, Impact
- EXTRUSION, Insulated wires. See WIRES, Insulated, Extrusion
- EXTRUSION, Metals. See METALS, Extrusion
- EXTRUSION, P.V.C. See P.V.C., Extrusion
- EXTRUSION, Plastic insulated wires. See WIRES, Insulated (Plastics) Extrusion
- EXTRUSION, Polythene. See POLYTHENE, Extrusion
- EXTRUSION, Polythene, Cables, Telephony. See TELEPHONY, Cables, Polythene, Extrusion
- EXTRUSION, Polythene insulation, Submarine cables, Telephony. See TELEPHONY, Cables, Submarine, Insulation, Polythene, Extrusion
- EXTRUSION, Powder metallurgy, Stannous oxide-Tin, Rods. See RODS, Tin-Stannous oxide, Powder metallurgy, Extrusion
- EXTRUSION, Refractory metals. See METALS, Refractory, Extrusion
- EXTRUSION, Rubber. See RUBBER, Extrusion
- EXTRUSION, Thermoplastics. See THERMOPLASTICS, Extrusion
- EXTRUSION, Underwater, Copper tubes. See TUBES, Copper, Extrusion, Underwater
- EYEBROWS, Muscles, Electromagnetic brake activation, Motor cars. See MOTOR CARS, Brakes, Electromagnetic, Activation, Eyebrow muscles
- EYES  
Related Headings:  
VISION
- EYES, Protection**  
Visual efficiency and safety. H. Few. *Brit. J. of Industrial Safety*, 6 (Autumn 64) p.201-3. il. refs.
- EYES, Protection, Equipment**  
Industrial eye protection. G. R. Drury. *Electrical Manufacture*, 8 (May 64) p.17+
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- EYES, Protection, Equipment  
Related Headings:  
GOGGLES
- F-111A MILITARY AIRCRAFT. See AIRCRAFT, Military, Types, General Dynamics F-111A
- F-111B NAVAL AIRCRAFT. See AIRCRAFT, Naval, Types, Grumman F-111B
- FABRICS**  
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- Challenge of warp knitting to woven fabrics. D. F. Paling. *Textile Weekly*, 64 (1 May 64) p.773-7
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- Fabric production by weaving and knitting—an overall view. M. S. Burnip. *Textile Recorder*, 82 (Jun 64) p.56-8. il.



## FABRICS

## Related Headings :

BROADCLOTH  
GAUZE, Fabrics  
LACE  
WEAVING

## FABRICS-SUBHEADINGS-Synopsis

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

## Problems

*Shrinkage*  
*Electrostatic charging*  
*Soiling*

## Properties

*Crease resistance*  
*Flame resistance*  
*Geometry*  
*Mechanical properties*  
*Stiffness*

## Abrasion

## Technical activities

## Design

## Manufactures

*Inspection*  
*Testing*  
*Cutting*  
*Wet processing*  
*Drying*  
*Washing*  
*Finishing*  
*Finishes*  
*Singeing*  
*Dyeing*  
*Printing*  
*Flocking*  
*Laminating*  
*Tufting*  
*Sew-knitting*

## Parts

## Selvedges

## Types of fabrics

*Check*  
*Spot*  
*Stripe*  
*Elastic*  
*Hydrophobic*  
*Water repellent*  
*Chemically resistant*  
*Non-woven*  
*Knitted*  
*Warp knit*

## Backed

## Foamback

## Coated

## Dyed

## Metallised

## Compound

## Double

## Cellular

## Twill

## Pile

## Tufted

## Narrow

## FABRICS-SUBHEADINGS-Synopsis-cont.

## Types by material

*Blended*  
*Cellulosic*  
*Cotton*  
*Woollen*  
*Worsted*  
*Man-made fibres*  
*Cellulosic*  
*Rayon*  
*Polynosic*  
*Cellulose acetate*  
*Tricel*  
*Polyamides*  
*Nylon*  
*Polyester fibre*  
*Terylene*  
*Acrylic fibres*  
*Acrilan*  
*Courtelle*  
*P.V.C.*  
*Polyurethane*  
*Split-fibre*  
*Asbestos fibres*

## Types by purpose

## Industrial

## FABRICS, Abrasion, Tests

Abrasion results viewed with "great care". Dyer, Textile Printer, Bleacher & Finisher, 131 (6 Mar 64) p.391+. il.

Final report on inter-laboratory abrasion tests. Standing Consultative Conference on Textile Research, Committee of Directors of Textile Research Associations. J. of Textile Inst. Proc., 55 (Apr 64) p.1-12. refs.

## FABRICS, Acrilan, Knitted, Fleecy

Acrilan knitted fleece. G. Hammer-Schmidt. Man-Made Textiles, 41 (Jul 64) p.41-6. il.

## FABRICS, Acrylic fibres, Printing, Dyes

Printing acrylic fibre fabrics. Textile Weekly, 62 (2) (25 Sep 64) p.520+

## FABRICS, Acrylic fibres, Tufted, Manufactures

Cotton tufter turns to acrylics [John A. Stott, Ltd., Blackburn] Man-Made Textiles, 41 (Aug 64) p.63+. il.

## FABRICS, Asbestos fibres

Life problems in industrial asbestos textiles. K. Jowsey & H. Longley. Textile Inst. & Industry, 2 (Jun 64) p.118-21

## FABRICS, Backed, Sewing

Backed cloths: yarns, variety and construction. A. J. Bennett. Textile Manufacturer, 90 (Jan 64) p.8-9. il.

## FABRICS, Blended

Effect of differences in blend content on the appearance of fabrics. F. Hermann & P. P. Townend. Textile Recorder, 82 (Jun 64) p.52-4. il. ref.

## FABRICS, Cellular

Lightweight warmth. W. H. Rees. Textile Inst. & Industry, 2 (Feb 64) p.29-31. il. refs.

FABRICS, Cellulose acetate, Colour television testing. See TELEVISION, Colour, Testing, Fabrics, Cellulose acetate

## FABRICS, Cellulose acetate, Dyeing, Disperse dyes

Report of the committee on the dyeing properties of disperse dyes, pt.1: disperse dyes on secondary cellulose acetate. J. of Soc. of Dyers & Colourists, 80 (May 64) p.237-42. il. ref.

## FABRICS, Cellulosic, Bleaching

Practical aspects of the bleaching of cellulosic materials. C. Garrett. J. of Soc. of Dyers & Colourists, 80 (Mar 64) p.117-23. refs.

**FABRICS, Cellulosic, Dyeing, Monochloro-s-triazine, Catalysts, Amines**

Reaction mechanism and fixation of monochloro-s-triazine dyes on cellulose using tertiary amine catalysts. T. L. Dawson. *J. of Soc. of Dyers & Colourists*, 80 (Mar 64) p.134-43. il. refs.

**FABRICS, Cellulosic, Dyeing, Reactive, Catalysts, Amines**

New catalysts to assist the fixation of reactive dyes. B. C. M. Dorset. *Textile Manufacturer*, 90 (Jan 64) p.24-7. il.

**FABRICS, Cellulosic, Dyes, Reactive, Determination**

Further notes on reactive dyes and their identification on cellulosic fibres. F. Jordinson & R. Lockwood. *J. of Soc. of Dyers & Colourists*, 80 (Apr 64) p.202-4. refs.

**FABRICS, Cellulosic, Finishes, Flameproof**

Flame retardant treatments for cellulosic materials. A. R. Smith. *Dyer, Textile Printer, Bleacher & Finisher*, 132 (4 Sep 64) p.343-8. il. refs.

**FABRICS, Cellulosic, Finishes, Resins, Chromatography, Thin-layer**

Further applications of chromatography in dyeing and finishing. J. C. Brown. *J. of Soc. of Dyers & Colourists*, 80 (Apr 64) p.185-95. il. refs.

**FABRICS, Cellulosic, Finishing**

Modern finishing with resins and cross-linking agents. B. C. M. Dorset. *Textile Manufacturer*, 90 (Jul 64) p.283+

**FABRICS, Cellulosic, Printing, Reactive dyes**

New method of linking dyestuffs to cellulose fibres. *Textile Recorder*, 81 (Mar 64) p.61+. refs.

**FABRICS, Cellulosic-Acrylic copolymers**

Graft co-polymers of acrylic compounds on cellulose. R. W. Moncrieff. *Textile Weekly*, 64 (1 May 64) p.765-7

**FABRICS, Check, Weaving, Colour**

Weave and colour combinations in check and spot fabrics. A. J. Bennett. *Textile Manufacturer*, 90 (Aug 64) p.316+. il.

**FABRICS, Chemically resistant**

You're safer with synthetics, pt.1: protective properties of the new fibres. R. W. Moncrieff. *Man-Made Textiles*, 41 (Jun 64) p.37-40. il.

You're safer with synthetics, pt.2: special fibres provide properties-to-fit. R. W. Moncrieff. *Man-Made Textiles*, 41 (Jul 64) p.34+. il.

**FABRICS, Clothing. See CLOTHING, Fabrics****FABRICS, Coated, Plastics, Electrical conductivity**

Electrically conducting flexible fabrics. *Rubber & Plastics Age*, 45 (Jul 64) p.804

**FABRICS, Coated, Powders, Polythene**

New powder technique of combining. *Textile Weekly*, 64 (31 Jul 64) p.185-6. il.

Take a powder, pt.1. S. Plum. *Man-Made Textiles*, 41 (May 64) p.57+. il.

Take a powder, pt.2. S. Plum. *Man-Made Textiles*, 41 (Jun 64) p.57-8. il.

**FABRICS, Compound, Weaving**

Design and construction of double, etc., fabrics. A. J. Bennett. *Textile Manufacturer*, 90 (Oct 64) p.400-1. il.

**FABRICS, Container materials. See CONTAINERS, Fabric****FABRICS, Cotton**

Related Headings:  
POPLIN

**FABRICS, Cotton, Bleaching**

Continuous bleaching of cotton fabrics. S. Moffitt. *Textile Recorder*, 81 (Mar 64) p.65-7. il.

Recent developments in bleaching methods, pt.1. C. Garrett. *Textile Recorder*, 82 (Dec 64) p.58-60. il.

**FABRICS, Cotton, Bleaching, Sodium hypochlorite**

Accelerated hypochlorite bleaching of cotton fabrics. H. Borsten. *Textile Recorder*, 82 (May 64) p.71+. il. refs.

**FABRICS, Cotton, Bleaching, Sodium hypochlorite-Hydrogen peroxide**

Cotton fabric bleaching: use of chlorite & hydrogen peroxide mixtures. R. W. Moncrieff. *Textile Weekly*, 64 (23 Oct 64) p.696+

**FABRICS, Cotton, Crease resistance, Cross-linking, Disulphides**

Disulphide bridge in the crease-resist finishing of cotton. J. T. Marsh. *Textile Recorder*, 82 (Nov 64) p.91-2

**FABRICS, Cotton, Dyed, Light fastness, Effect of humidity**

Photo chemical tendering and fading of dyed textiles at different humidities. A. H. Little & J. W. Clayton. *J. of Soc. of Dyers & Colourists*, 79 (Dec 63) p.671-7. il.

**FABRICS, Cotton, Dyeing**

Practical preparation of goods for dyeing (summary) H. Hilton. *Dyer, Textile Printer, Bleacher & Finisher*, 131 (1 May 64) p.673-4

**FABRICS, Cotton, Finishing**

Modern finishing with resins and cross-linking agents. B. C. M. Dorset. *Textile Manufacturer*, 90 (Jul 64) p.283+

**FABRICS, Cotton, Finishing, Formaldehyde solutions**

Modern use of formaldehyde in the crease-resist finishing of cotton. J. T. Marsh. *Textile Recorder*, 82 (Aug 64) p.57-9. il.

**FABRICS, Cotton, Loftiness**

New methods of increasing the warmth and loft of cotton fabrics. A. J. Hall. *Textile Recorder*, 82 (Jun 64) p.64-6. il. refs.

**FABRICS, Cotton, Resin finished**

Cross-linked cotton: a comparison between two cross-links of different length. J. G. Roberts. *J. of Textile Inst. Trans.*, 55 (Aug 64) p.418-30. refs.

**FABRICS, Cotton, Smooth drying, Finishes**

Self-smoothing finishes: wet and dry crease recovery. J. T. Marsh. *Textile Manufacturer*, 90 (May 64) p.197-9

**FABRICS, Cotton, Weaving**

Striking cloths from Nigeria. A. Riggs. *Wool Record*, 105 (29 May 64) p.32

**FABRICS, Cotton, Weaving, Costs, Effect of loom speed**

Factors relating loom speed and weaving cost. P. R. Lord & M. H. Mohamed. *Textile Recorder*, 82 (Oct 64) p.67-9. il. refs.

**FABRICS, Cotton, Weaving, Work study**

Work study in weaving. P. Gill. *Textile Inst. & Industry*, 2 (Mar 64) p.56-8

**FABRICS, Cotton-Dacron, Dyeing**

Increasing production of Thermosol dyed polyester/cellulosic fabrics. J. J. Iannarone & W. J. Wygand. *Dyer, Textile Printer, Bleacher & Finisher*, 132 (6 Nov 64) p.733+

**FABRICS, Courteille, Printing**

Printing, steaming and scouring "Courteille" fabrics. *Textile Manufacturer*, 90 (Jan 64) p.35+

**FABRICS, Crease resistance, Testing, Instruments**

L.I.N.R.A. Sunray crease evaluator. L. B. Archibald, T. Bailie, W. H. Ewing & J. L. Spencer-Smith. *J. of Textile Inst., Trans.*, 55 (Sep 64) p.477-84. il.

**FABRICS, Crease resistance, Wet**

Wet crease recovery. J. T. Marsh. *Textile Manufacturer*, 90 (Nov 64) p.465-8

**FABRICS, Cutting, Machines, Bearings, Ball**

Cloth cutting machine [Banker yds Maskin Runo 120] Ball Bearing J. (Oct 64) p.27-8. il.

**FABRICS, Design**

Plain weave variations: pattern effects from combinations of weave and colour effects. N. C. Gee. *Textile Manufacturer*, 90 (Nov 64) p.440+. il.

**FABRICS, Double**

Double cloths: design and construction. A. J. Bennett. *Textile Manufacturer*, 90 (Mar 64) p.96-8. il.



**FABRICS, Drying**

High evaporative drying. [Tenterflex system]. Hosiery Times, 37 (Oct 64) p.36+. il.

**FABRICS, Drying, Cylinders**

High evaporative drying unit and Tenterflex system. Dyer, Textile Printer, Bleacher & Finisher, 132 (4 Sep 64) p.348-9. il.

**FABRICS, Drying, Stenters**

Design and operating features in a modern jet stenter [Dornier-Haubold Type S60 stenter] W. Beyer. Textile Manufacturer, 90 (Nov 64) p.469-70. il.  
Dornier-Haubold jet stenter. W. Beyer. Dyer, Textile Printer, Bleacher & Finisher, 132 (20 Nov 64) p.815-16. il.  
Modern jet stenter [Dornier-Haubold S 60] W. Beyer. Hosiery Trade J., 71 (Nov 64) p.139-40. il.

**FABRICS, Dyed, Light fastness**

Variations in assessment of light fastness and in rates of fading and spacing of the blue standards. S. M. Jaeckel, P. D. Ward & D. M. Hutchings. J. of Soc. of Dyers & Colourists, 79 (Dec 63) p.702-22. il. refs.

**FABRICS, Dyed (Reactive dyes) Light fastness, Effect of crease resistance resins**

Enhanced fading of dyes caused by crease-resist resins: a proposed mechanism. W. Ingamells. J. of Soc. of Dyers & Colourists, 79 (Dec 63) p.651-60. il. refs.

**FABRICS, Dyeing, Creases**

Solving practical dyehouse problems, pt.1: creases. R. A. Peel. Dyer, Textile Printer, Bleacher & Finisher, 132 (18 Sep 64) p.411-14  
Solving practical dyehouse problems, pt.2: stains and unevenness. R. A. Peel. Dyer, Textile Printer, Bleacher & Finisher, 132 (20 Nov 64) p.779-83

**FABRICS, Dyeing, Faults**

"Blame the dyer" but faults are not always what they seem. J. Whittaker. Textile Weekly, 64 (6 Mar 64) p.389-90

**FABRICS, Dyeing, Machines**

Dyeing continuously fed fabrics [British Patent 945,421 summarised.] Dyer, Textile Printer, Bleacher & Finisher, 131 (20 Mar 64) p.478+. il.

**FABRICS, Dyeing, Reactive dyes**

Factors in the production of fast reactive dyestuffs. B. C. M. Dorset. Textile Manufacturer, 90 (Apr 64) p.153-9

**FABRICS, Dyeing, Remazol dyes, Vinyl sulphone groups**

Reactive vinyl sulphone group in dyeing and finishing processes. J. A. Somers. Textile Recorder, 82 (Sep 64) p.65-8

**FABRICS, Dyeing, Stains**

Solving practical dyehouse problems: stains and unevenness. R. A. Peel. Dyer, Textile Printer, Bleacher & Finisher, 132 (20 Nov 64) p.779-83

**FABRICS, Dyeing, Washing machines**

Home dyeing is an international business [Mayborn Products Dylan] Dyer, Textile Printer, Bleacher & Finisher, 131 (5 Jun 64) p.841-2. il.

**FABRICS, Dyeing, Winches**

Rayon and synthetic fibres: dyeing and finishing of viscose, acetate cuprammonium and other rayon and synthetic fibres. Dyer, Textile Printer, Bleacher & Finisher, 131 (3 Jan 64) p.63-4

**FABRICS, Elastic**

Contribution of new materials to garment design. Textile Manufacturer, 90 (Jan 64) p.33+  
Elastomerics gaining momentum. J. Rest. Hosiery Times, 37 (Apr 64) p.37+  
Manufacture of elastic webs. H. Hanson. Textile Recorder, 82 (Oct 64) p.78-80. il.  
Manufacture of elastic webs, pt.2. H. Hanson. Textile Recorder, 82 (Nov 64) p.88+. il.  
Manufacture of woven & knitted fabrics containing elastomeric fibres. G. A. Frith. Textile Inst. & Industry, 2 (Apr 64) p.74-6. ref.  
Stretch and core-spun fabrics. Dyer, Textile Printer, Bleacher & Finisher, 132 (4 Sep 64) p.373+. il.  
FABRICS, Elastic, Clothing. See CLOTHING, Fabrics, Elastic

**FABRICS, Elastic, Knitting**

Problems in knitting stretch fabrics. J. J. F. Knapton. Hosiery Trade J., 71 (Jul 64) p.107-9

**FABRICS, Elastic, Knitwear. See KNITWEAR, Fabrics, Elastic****FABRICS, Elastic, Outerwear. See OUTERWEAR, Fabrics, Elastic****FABRICS, Electrostatic charging**

Electrostatic charging on fabrics at various humidities. P. J. Sereda & R. F. Feldman. J. of Textile Inst. Trans., 55 (May 64) p.288-98. il. refs.

**FABRICS, Finishes**

Recent developments in chemical finishing. J. G. Roberts. Dyer, Textile Printer, Bleacher & Finisher, 131 (6 Mar 64) p.385+

**FABRICS, Finishes, Drying**

Contact drying of surface-treated materials. Textile Weekly, 64 (3 Jul 64) p.34+. il.

**FABRICS, Finishes, Starch**

Modified starches in finishing. Textile Weekly, 63 (20 Dec 63) p.1203+

**FABRICS, Finishes, Vinyl sulphone groups**

Reactive vinyl sulphone group in dyeing and finishing processes. J. A. Somers. Textile Recorder, 82 (Sep 64) p.65-8

**FABRICS, Finishing**

New knowledge in solving dyeing and finishing problems. B. C. M. Dorset. Textile Manufacturer, 90 (Aug 64) p.327-33. il.

Recent progress in dyeing and finishing techniques. A. T. Peters. Textile Recorder, 81 (Jan 64) p.58+. il. refs.

**FABRICS, Finishing, Feed units**

System for continuously feeding cloth from rolls [Mount Hope Continuous Roll Feed] Textile Recorder, 82 (Dec 64) p.75-6. il.

**FABRICS, Finishing, Machines**

Advances in dyeing and finishing machinery (summary) J. F. Maulden. Dyer, Textile Printer, Bleacher & Finisher, 131 (19 Jun 64) p.937

**FABRICS, Finishing, Research**

Technological research in finishing. Textile Weekly, 64 (13 Nov 64) p.824-5. il.

**FABRICS, Finishing, Tension, Control systems**

Fundamentals of automatic tension control. T. H. Cooper. Textile Manufacturer, 90 (Sep 64) p.377-8. il.

**FABRICS, Flame resistance**

Matter of life and death: fire hazards of fabrics. A. J. Pickett. Rubber & Plastics Age, 45 (May 64) p.506

**FABRICS, Flocking, Electrostatic**

HUG electrostatic flock printing machinery. Hosiery Trade J., 71 (Sep 64) p.112  
New flock-printing service: Swiss firm offers flock, adhesive, machines, know-how. Hosiery Times, 37 (Sep 64) p.99+

**FABRICS, Foamback**

Developments in the preparation of polyurethane-foam/fabric laminates. W. F. Smith. *Plastics Inst. Trans.*, 32 (Feb 64) p.175-9. il. refs.

Fabric/foam laminates: adhesives, methods, machinery and finishes, etc. W. F. Smith. *Textile Manufacturer*, 90 (Feb 64) p.59-61

How to choose foam. K. W. Richmond. *Skinner's Record*, 38 (Apr 64) p.302-3

Lightweight warmth. W. H. Rees. *Textile Inst. & Industry*, 2 (Feb 64) p.29-31. il. refs.

Potentialities of foambacked fabrics (abstract) A. J. Chapman. *Hosiery Trade J.*, 71 (May 64) p.132-4

**FABRICS, Foamback, Laminating**

Europe's biggest laminating network: Cellofoam Ltd.'s

Dover headquarters is hub of a Continental organisation. *Skinner's Record*, 38 (Sep 64) p.755+. il.

Lamination—the time and the place (extracts) I. Levy. *Dyer, Textile Printer, Bleacher & Finisher*, 132 (4 Dec 64) p.875-6

**FABRICS, Foamback, Manufactures**

British backer heads for world title [Cellofoam Ltd.]

*Skinner's Record*, 38 (Apr 64) p.291-2. il.

F.T.L.: flame firm looks to new method of adhesive bonding. *Man-Made Textiles*, 41 (Jan 64) p.45-6. il.

5-star foambackers. *Man-Made Textiles*, 41 (Jan 64) p.52+. il.

"Foamless foam": General Foam predicts a continued growth of foam in textiles usage, but with a change in approach. *Man-Made Textiles*, 41 (Jan 64) p.26-7. il.

Lintaproof: water and stain repelling finish for laminates. *Man-Made Textiles*, 41 (Jan 64) p.48+. il.

**FABRICS, Foamback, Printing**

Foambacking and printing in one operation. *Man-Made Textiles*, 41 (Jun 64) p.64-5. il.

**FABRICS, Furnishings. See FURNISHINGS, Fabrics****FABRICS, Geometry**

General system of woven-fabric geometry. J. B.

Hamilton. *J. of Textile Inst. Trans.*, 55 (Jan 64) p.66-82. il. refs.

Ratio comparison of fabric structures. M. W. Alford. *J. of Textile Inst. Trans.*, 55 (Jan 64) p.83-98. il. refs.

**FABRICS, Household. See HOUSEHOLD TEXTILES****FABRICS, Hydrophobic, Silk screen printing**

Screen printing of hydrophobic fabrics. D. H. Eatock.

*Dyer, Textile Printer, Bleacher & Finisher*, 132 (18 Sep 64) p.415-17. il.

**FABRICS, Industrial, Manufactures**

Three centuries of service. [James Kenyon & Co.] *Paper Making & Paper Selling*, 83 (Jan/Feb 64) p.11-12

**FABRICS, Inspection**

Fabric inspection & measurement [Miniroller] *Textile Weekly*, 64 (14 Aug 64) p.262+. il.

**FABRICS, Jute, Reinforcement, Polyester-Glass fibre. See**

POLYESTER-GLASS FIBRE, Fabric reinforcements, Jute

**FABRICS, Knitted, Dyeing**

Dyeing of knitted fabric. R. N. Barber, D. Haigh, H.

Memon & J. Zdan-Michajlowicz. *Textile Inst. & Industry*, 2 (May 64) p.96-8. refs.

**FABRICS, Knitted, Geometry**

Generalised geometry of weft-knitted fabrics. T. S.

Nutting & G. A. V. Leaf. *J. of Textile Inst. Trans.*, 55 (Jan 64) p.45-73. refs.

**FABRICS, Knitted, Raising**

Raising (brushing) of knitted fabrics. J. M. D. Tomlinson. *Textile Inst. & Industry*, 2 (Jan 64) p.7-10. il.

**FABRICS, Knitted, Tubular, Shrinkage**

Shrinkage control of tubular knit goods [AMF process] *Textile Weekly*, 64 (10 Jan 64) p.56-7. il.

**FABRICS, Knitwear. See KNITWEAR, Fabrics****FABRICS, Labels, Clothing. See CLOTHING, Labels, Fabrics**

**FABRICS, Laminates, Bearings, Mills, Rolling, Steel. See** STEEL, Rolling, Mills, Bearings, Laminates, Fabrics

**FABRICS, Laminating, Adhesives**

Inexpensive adhesive laminator [Weston-Evans "Textstik" unit] *Hosiery Times*, 37 (Nov 64) p.79-8. il.

**FABRICS, Laminating, Blanket feeding**

Blanket feed gives precise control in laminating. *Textile Weekly*, 64 (31 Jul 64) p.181-2. il.

**FABRICS, Man-made fibres, Blended**

Man-made fibres used in blends. P. Oliver. *Textile Weekly*, 64 (23 Oct 64) p.688+

**FABRICS, Man-made fibres, Effect of fibre cross section shape**

How fabric properties are determined by modifications to fibre shape. B. C. M. Dorset. *Textile Manufacturer*, 90 (Mar 64) p.110+. il.

**FABRICS, Man-made fibres, Finishing, Starch, Acetate gums**

Modified starches in warp sizing [Mirafilm] *Textile Weekly*, 64 (3 Jan 64) p.25+

**FABRICS, Man-made fibres, Flocking, Electrostatic**

Growing interest in flock methods for various branches of the trade. *Skinner's Record*, 38 (Nov 64) p.1015-18. il.

**FABRICS, Man-made fibres, Industrial clothing. See**

CLOTHING, Industrial, Fabrics, Man-made fibres

**FABRICS, Man-made fibres, Making-up, Sealing, Heat**

Bye-bye puckers—bye-bye sewing: two approaches to joining fabrics—ultrasonic and high frequency. *Man-Made Textiles*, 41 (Mar 64) p.42+. il.

**FABRICS, Man-made fibres, Papermaking machines. See**

PAPERMAKING, Machines, Fabrics, Man-made fibres

**FABRICS, Man-made fibres, Tufted, Fleecy, Yarns**

Yarn developments for tufted fleece fabrics. R. Ellison. *Skinner's Record*, 38 (Jun 64) p.522-3. il.

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**FABRICS, Military clothing. See CLOTHING, Military, Fabrics****FABRICS, Narrow, Dyeing**

Dyeing and finishing narrow fabrics, pt.2. H. W. Partridge. *Man-Made Textiles*, 41 (Jan 64) p.35+

**FABRICS, Narrow, Elastic, Looms**

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**FABRICS, Narrow, Finishing**

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- Lycra—for the finisher. J. D. Atkinson. *Dyer, Textile Printer, Bleacher & Finisher*, 131 (1 May 64) p.702+

**FABRICS, Polyurethane, Elastic, Finishing**

- Lycra—for the finisher. J. D. Atkinson. *Dyer, Textile Printer, Bleacher & Finisher*, 131 (1 May 64) p.702+

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Double prints on rayon cloth. R. Sansone. Dyer, Textile Printer, Bleacher & Finisher, 132 (4 Sep 64) p.381+. il.

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Fancy stripe fabric desing. R. Sansone. Textile Weekly, 64 (20 Nov 64) p.863+. il.

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Colour streakiness in worsted ingrain blends, pt.1: fibre arrangement & efficiency of blending. P. P. Townsend, R. Harper & J. D. Watt. *J. of Textile Inst. Trans.*, 55 (Jul 64) p.T352-64. refs.

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Keeping the press in the picture. L. A. G. Pamell.

*P.O. Telecommunications J.*, 15 (Winter 63) p.31-3. il.

**FACSIMILE TRANSMISSIONS, Cloud pictures, Meteorology, Artificial satellites. See SATELLITES, Artificial, Meteorology, Cloud pictures, Facsimile transmissions****FACSIMILE TRANSMISSIONS, Printing, Newspapers. See NEWSPAPERS, Printing, Facsimile transmission****FACSIMILE TRANSMISSIONS, Receivers**

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ALCOHOLIC BEVERAGES, Storage, Buildings

ALTERNATORS, Manufactures, Factories

ANIMAL FEEDINGSTUFFS, Manufactures, Factories

BACON, Processing, Factories

BAKERIES, Architecture

BEER, Bottling, Buildings

BISCUITS, Manufactures, Factories

BOARD, Paper, Manufactures, Factories

CHICKENS, Processing, Factories

CHOCOLATE, Manufactures, Factories, Architecture

CLOTHING, Woollen, Manufactures, Factories

DRUGS, Factories, Architecture

ELECTRIC METERS, Manufactures, Factories

ELECTRONICS, Components, Manufactures, Factories

FLATS, Prefabrication, Components, Manufactures, Factories

FOOD, Processing, Factories

HEATING, Equipment, Manufactures, Factories

HOUSING, Prefabricated, Components, Manufactures, Factories

ICE CREAM, Manufactures, Factories

INSTRUMENTS, Manufactures, Factories

MACHINE TOOLS, Components, Iron, Grey, Casting, Foundries, Architecture

MOTOR CARS, Engines, Manufactures, Factories

MOTOR CARS, Manufactures, Factories

PACKAGING, Cases, Fibre board, Manufactures, Factories

PERFUMES, Production, Factories

STATIONERY, Manufactures, Factories

STEEL, Mills

VENTILATION, Equipment, Manufactures, Factories

VINEGAR, Malt, Manufactures, Factories

WALLPAPERS, Manufactures, Factories

WOOD, Manufactures, Factories



# **FACTORIES—SUBHEADINGS—Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

- Problems
  - Fires*
  - Noise*
  - Town planning*
- Construction & design
  - Design*
  - Interior decoration*
  - Interior design*
  - Site preparation*
- Parts
  - Roofs*
- Services
  - Heating*
  - Air conditioning*
  - Ventilation*
  - Lighting*
  - Electrical installations*
    - Power supplies*
    - Steam supplies*
  - Cranes*
- Types of factories
  - Leasehold*
  - By material*
    - Concrete*
  - By form*
    - Flatted*
- Ancillaries
  - Social buildings*

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- Factory in reinforced concrete. G. S. Millington & J. D. McCaughey. *Structural Engr.*, 42 (Jul 64) p.217-27. il.

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- Cranage considerations in building design. J. Dallas. *Machinery Lloyd* (European ed.) 36 (25 Jul 64) p.20-1. il.
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- Factory design and productivity. P. Manning. *Builder*, 206 (12 Jun 64) p.1253-4

## **FACTORIES, Electrical installations**

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- Ring circuit in industry. *Power & Works Engng.*, 59 (Apr 64) p.42-6. il.

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- Fire—take no chances. E. G. Hobbs. *Woodworking Industry*, 22 (May 64) p.275-6. il.
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CIRCLIPS

DOWELS

HINGES

NUTS

PINS

RETAINING RINGS

RIVETING

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SCREWS

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- FAT.** See also **Oils**
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- FAT, Skim milk.** See **MILK, Skim, Fat content**
- FATIGUE**  
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- FATIGUE, Copper.** See **COPPER, Fatigue**
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- FATIGUE, Chromium-Nickel.** See **CHROMIUM-NICKEL, Fatigue**
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- FATIGUE, Drivers, Motor cars.** See **MOTOR CARS, Drivers, Fatigue**
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- FATIGUE, Metals.** See **METALS, Fatigue**
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- FATIGUE, Slag inclusions, Butt welding, Mild steel plates.** See **PLATES, Steel, Mild, Welding, Butt, Slag inclusions, Fatigue**
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**FEEDWATER, Flash boilers. See BOILERS, Flash, Feedwater****FEEDWATER, Once through boilers, Power stations. See POWER STATIONS, Boilers, Once through, Feedwater****FEILDEN, G.B.R. See DEPARTMENT OF SCIENTIFIC & INDUSTRIAL RESEARCH, Committee on Engineering Design****FELIXSTOWE**

See

DOCKS, Felixstowe

PORTS, Felixstowe

**FELLMONGERING**

Related Headings:

SHEEPSKINS, Depilation

**FELT, Moisture absorption, Cylinders, Drying, Papermaking.**

See PAPERMAKING, Drying, Cylinders, Moisture absorption, Felt

**FELT, Needled, Papermaking. See PAPERMAKING, Felt, Needled****FELT, Papermaking. See PAPERMAKING, Felt****FELT, Wool, Hats. See HATS, Felt, Wool****FELTING, Wool, Fabrics. See FABRICS, Woolen, Felting****FENCES (Farms) Wire, Electrification**

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- FERMENTATION, Malt extracts.** See **MALT, Extracts, Fermentation**
- FERMENTATION, Paraffins.** See **PARAFFINS, Fermentation**
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- FERRITES, Rings, Microwave phase shifters.** See **PHASE SHIFTERS, Microwave, Rings, Ferrites**
- FERRITES, Waveguides.** See **WAVEGUIDES, Loaded, Ferrite**
- FERRITIC CASTING STEEL.** See **STEEL (Casting) Ferritic**
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**FERROUS METALS**. See **IRON**

**FERROUS METALS**. See **STEEL**

# **FERROUS SULPHIDE**

Related Headings:

PYRRHOTITE

**FERROUS SULPHIDE**, Corrosion, Pipes, Water. See **WATER**, Pipes, Corrosion, Ferrous sulphide

# **FERTILISERS**

Related Headings:

BASIC SLAG

COMPOST, Production, Town refuse

FISH MEAL

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**HYDROELECTRIC POWER STATIONS**, Pumped storage, Ffestiniog

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**FIAT 500D CARS**. See **MOTOR CARS**, Types, Fiat 500D

**FIAT 600 CARS**. See **MOTOR CARS**, Types, Fiat 600

**FIAT 850 CARS**. See **MOTOR CARS**, Types, Fiat 850

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**FIBRE BOARD**, Corrugated, Cases, Packaging. See **PACKAGING**, Cases, Fibre board, Corrugated

**FIBRE BOARD**, Corrugated, Containers, Fruit. See **FRUIT**, Containers, Fibre board, Corrugated

**FIBRE BOARD**, Farm buildings. See **FARM BUILDINGS**, Fibre board

**FIBRE BOARD**, Floors. See **FLOORS**, Fibre board

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**FIBRE GLASS**, Dish aerials. See **AERIALS**, Dish, Glass fibre

**FIBRE GLASS**, Optics. See **FIBRE OPTICS**

**FIBRE GLASS-EPOXY RESIN**. See **EPOXY RESIN-GLASS FIBRE**

**FIBRE GLASS-EPOXY RESIN**, Pressure vessels. See **PRESSURE VESSELS**, Epoxy resin-Glass fibre

**FIBRE GLASS-EPOXY RESIN**, Vacuum chambers, Proton synchrotrons. See **SYNCHROTRONS**, Proton, Vacuum chambers, Epoxy resin-Glass fibre

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**FIBRE GLASS-POLYESTER**, Boats. See **BOATS**, Polyester-Glass fibre



- FIBRE GLASS-POLYESTER, Bodies, Commercial vehicles. See VEHICLES, Commercial, Bodies, Polyester-glass fibre
- FIBRE GLASS-POLYESTER, Motor cycle parts. See MOTOR CYCLES, Parts, Polyester-Glass fibre
- FIBRE GLASS-POLYESTER, Roofs, Exhibition buildings. See EXHIBITION BUILDINGS, Roofs, Polyester-Glass fibre
- FIBRE GLASS-POLYESTER, Tanks, Road tankers. See TANKERS, Road, Tanks, Polyester-Glass fibre
- FIBRE GLASS-POLYESTER, Tendons, Prestressed concrete, Beams. See BEAMS, Concrete, Prestressed, Tendons, Polyester-Glass fibre
- FIBRE GLASS REINFORCED METALS. See METALS, Reinforced-Glass fibre
- FIBRE GLASS REINFORCED NYLON 66. See NYLON 66, Reinforced-Glass fibre
- FIBRE GLASS REINFORCED PLASTICS. See PLASTICS, Reinforced-Glass fibre
- FIBRE GLASS REINFORCED PLASTICS, Bodies, Motor cars. See MOTOR CARS, Bodies, Plastics, Reinforced-Glass fibre
- FIBRE GLASS REINFORCED PLASTICS, Bodies, Motor vehicles. See MOTOR VEHICLES, Bodies, Plastics, Reinforced-Glass fibre
- FIBRE GLASS REINFORCED PLASTICS, Coatings, Tanks. See TANKS, Coatings, Plastics, Reinforced-Glass fibre
- FIBRE GLASS REINFORCED PLASTICS, Containers. See CONTAINERS, Plastics, Reinforced-Glass fibre
- FIBRE GLASS REINFORCED PLASTICS, Display cabinets, Frozen foods. See FOOD, Frozen, Display cabinets, Plastics, Reinforced, Glass fibre
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- FIBRE GLASS REINFORCED PLASTICS, Panels, Flats. See FLATS, Panels, Plastics, Reinforced-Glass fibre
- FIBRE GLASS REINFORCED PLASTICS, Passenger rolling stock components, Railways. See ROLLING STOCK (Passenger, Railways) Components, Plastics, Reinforced-Glass fibre
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- FIBRE GLASS REINFORCED RUBBER, Cords, Tyres, Motor cars. See MOTOR CARS, Tyres, Cords, Rubber, Reinforced-Glass fibre
- FIBRE GLASS REINFORCED RUBBER, Tyres, Aircraft. See AIRCRAFT, Tyres, Rubber, Reinforced-Glass fibre
- FIBRE GLASS REINFORCED RUBBER, V-belts, Household appliances. See HOUSEHOLD APPLIANCES, V-belts, Rubber, Reinforced-Glass fibre
- FIBRE GLASS REINFORCED THERMOPLASTICS. See THERMOPLASTICS, Reinforced-Glass fibre
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- FIBRE OPTICS, Ulexite. See ULEXITE, Fibre optics
- FIBRES**  
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- FIBRES, Cotton. See COTTON, Fibres
- FIBRES, Crystals. See CRYSTALS, Fibres
- FIBRES, Hard. See HARD FIBRES
- FIBRES, Inorganic, Reinforced heterogeneous materials. See MATERIALS, Heterogeneous, Reinforced-Inorganic fibres
- FIBRES, Inorganic, Reinforced metals. See METALS, Reinforced-Inorganic fibres
- FIBRES, Inorganic  
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- FIBRES, Intermetallic compounds. See INTERMETALLIC COMPOUNDS, Fibres
- FIBRES, Paper. See PAPER, Fibres
- FIBRES, Silica. See SILICA, Fibres
- FIBRES, Silica, Reinforced aluminium. See ALUMINIUM, Reinforced-Silica fibres
- FIBRES, Textile. See TEXTILES
- FIELD EFFECT TRANSISTORS. See TRANSISTORS, Field effect
- FIELD EFFECT TRANSISTORS, Amplifier input stages. See AMPLIFIERS, Input stages, Transistors, Field effect
- FIELD EMISSION ELECTRON MICROSCOPY, Oxidation studies, Nickel. See NICKEL, Oxidation, Studies, Microscopy, Electron, Field emission
- FIELD GLASSES. See BINOCULARS
- FIELD-ION MICROSCOPES. See MICROSCOPES, Field-ion
- FIELD-ION MICROSCOPY. See MICROSCOPY, Field-ion
- FIELD-ION MICROSCOPY, Orientation determination, Crystals. See CRYSTALS, Orientation, Determination, Field-ion microscopy
- FIELD-ION MICROSCOPY, Substrate surfaces, Effect on crystal growth, Vacuum deposition, Silver films. See FILMS, Silver, Vacuum deposition, Crystal growth, Effect of substrate surface, Studies, Field-ion microscopes
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- FILAMENT POLYNOSIC YARNS.** See YARNS, Polynosics, Filament
- FILAMENT WINDING, Plastics.** See PLASTICS, Filament winding
- FILAMENT WINDING, Reinforced glass fibre plastics.** See PLASTICS, Reinforced-Glass fibre, Filament winding
- FILAMENT WOUND EPOXY RESIN-GLASS FIBRE,**  
 Pressure vessels. See PRESSURE VESSELS, Epoxy resin-Glass fibre, Filament wound
- FILAMENT WOUND POLYESTER-GLASS FIBRE.** See POLYESTER-GLASS FIBRE, Filament wound

- FILAMENT WOUND POLYESTER-GLASS FIBRE**, Tanks, Road tankers. See **TANKERS**, Road, Tanks, Polyester-Glass fibre, Filament wound
- FILAMENT YARNS**. See **YARNS**, Filament
- FILAMENTS**, Tantalum, Ionisation gauges. See **IONISATION GAUGES**, Filaments, Tantalum
- FILAMENTS**, Tungsten, Ionisation gauges. See **IONISATION GAUGES**, Filaments, Tungsten
- FILAMENTS**, Tungsten, Thermionic electron tubes. See **ELECTRON TUBES**, Thermionic, Filaments, Tungsten
- FILING**, Refractory metals. See **METALS**, Refractory, Filing
- FILLERS**, Paint. See **PAINT**, Fillers
- FILLERS**, Polymers. See **POLYMERS**, Fillers
- FILLERS**, Reinforced glass fibre plastics. See **PLASTICS**, Reinforced-Glass fibre, Fillers
- FILLERS**, Rubber. See **RUBBER**, Fillers
- FILLETS**, Nickel-molybdenum-chromium-steel, Channel sections. See **SECTIONS**, Channel, Steel-Chromium-Molybdenum-Nickel, Fillers
- FILLING**, Casks, Beer. See **BEERS**, Casks, Filling
- FILLING**, Containers, Liquids. See **LIQUIDS**, Containers, Filling
- FILLING**, Volumetric, Containers, Powders. See **POWDERS**, Containers, Filling, Volumetric
- FILLING**, Volumetric, Packaging, Butter. See **BUTTER**, Packaging, Filling, Volumetric
- FILLING GAS**, Electric lamps. See **LAMPS**, Electric, Filling gases
- FILLING GAS**, Pressure, Effect on evaporation, Filaments, Electric lamps. See **LAMPS**, Electric, Filaments, Evaporation, Effect of filling gas pressure
- FILLINGS**, Fruit pies. See **FRUIT**, Pies, Fillings
- FILM**, Cellulose, Laminating, Covers, Books. See **BOOKS**, Covers, Laminating, Film, Cellulose
- FILM**, Cellulose, Packaging, Bottles. See **BOTTLES**, Packaging, Film, Cellulose
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**FILTERS, Lubricating oils.** See LUBRICATING OILS, Filters

**FILTERS, Lubricating oils, Diesel engines.** See DIESEL ENGINES, Lubricating oils, Filters

**FILTERS, Lubricating oils, Diesel engines, Ships.** See SHIPS, Diesel engines, Lubricating oils, Filters

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**FILTRATION, Gel.** See GEL FILTRATION

**FILTRATION, Protein, Flour.** See FLOUR, Protein, Filtration

**FILTRATION, Sewage treatment.** See SEWAGE, Treatment, Filtration

**FILTRATION, Vacuum, Rotary, Calcium chloride, Effluent treatment, Liquors, Wool scouring.** See WOOL, Scouring, Liquors, Effluent treatment, Calcium chloride, Filtration, Vacuum, Rotary

**FILTRATION, Water.** See WATER, Filtration

**FILTRATION, Water, Swimming baths.** See SWIMMING BATHS, Water, Filtration

**FIN TROLL STABILISERS, Ships.** See SHIPS, Roll stabilisers, Fin

**FINE CHEMICALS.** See CHEMICALS, Fine

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**FINISHES, Nylon stockings.** See STOCKINGS, Nylon, Finishes

**FINISHES, Resins, Cellulosic fabrics.** See FABRICS, Cellulosic, Finishes, Resins

**FINISHES, Smooth drying cotton fabrics.** See FABRICS, Cotton, Smooth drying, Finishes



## FINISHING

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 BARREL FINISHING  
 BLACKENING  
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 COATING  
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 FINISHING, Dyed terylene-wool tops. See TOPS, Terylene-Wool, Dyed, Finishing  
 FINISHING, Elastic polyurethane fabrics. See FABRICS, Polyurethane, Elastic, Finishing  
 FINISHING, Fabrics. See FABRICS, Finishing  
 FINISHING, Furniture. See FURNITURE, Finishing  
 FINISHING, Glass fibre reinforced plastics, Bodies, Motor vehicles. See MOTOR VEHICLES, Bodies, Plastics, Reinforced-Glass fibre, Finishing  
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 FINISHING, Man-made fibre linings, Clothing. See CLOTHING, Linings, Man-made fibres, Finishing  
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 FINISHING, Metals. See METALS, Finishing  
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 FINISHING, Motor vehicle parts. See MOTOR VEHICLES, Parts, Finishing  
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 FINISHING, Textured knitted nylon fabrics. See FABRICS, Nylon, Knitted (Textured) Finishing

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FINISHING, Textured tubular polyester fibres fabrics, Knitwear. See KNITWEAR, Fabrics, Polyester fibres, Tubular Textured, Finishing

FINISHING, Textured yarns, Man-made fibres, Fabrics, Knitwear. See KNITWEAR, Fabrics, Man-made fibres (Textured yarn) Finishing

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FINISHING, Wood, Building materials. See WOOD, Building materials, Finishing

FINISHING, Wood furniture. See FURNITURE, Wood, Finishing

FINISHING, Wool-Man-made fibre fabrics. See FABRICS, Man-made fibres-Wool, Finishing

FINISHING, Woollen broadcloth. See BROADCLOTH, Wool, Finishing

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FINITE DIFFERENCE APPROXIMATIONS, Eigensystems, Compression, Cantilever struts. See STRUTS, Cantilever, Compression, Eigensystems, Finite difference approximations

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FINITE DIFFERENCE APPROXIMATIONS, Parabolic partial differential equations. See DIFFERENTIAL EQUATIONS, Partial, Parabolic, Finite difference approximations

FINITE DIFFERENCE APPROXIMATIONS, Partial differential equations. See DIFFERENTIAL EQUATIONS, Partial, Finite difference approximations

FINITE DIFFERENCES, Transfer functions, Countercurrent heat exchangers, Nuclear power stations. See NUCLEAR POWER STATIONS, Heat exchangers, Countercurrent, Transfer functions, Finite differences

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BUSES, Transport, Finland

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LOCOMOTIVES, Diesel-electric, Finland

LOCOMOTIVES, Diesel-hydraulic, Finland

RAILCARS, Finland

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FIORIO SYSTEM, Prefabricated buildings. See BUILDINGS, Prefabricated, Fiorio system

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**FIRE RESISTANT MATERIALS, Building.** See **BUILDING, Materials, Fire resistant**

**FIRE RETARDANT PAINT.** See **PAINT, Fire retardant**

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**FIRE TUBE BOILERS.** See **BOILERS, Fire tube**

**FIRE TUBE BOILERS.** See **BOILERS, Lancashire**

**FIRE TUBE BOILERS, Heating, Passenger rolling stock, Railways.** See **ROLLING STOCK (Passenger, Railways) Heating, Boilers, Fire tube**

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**FIREPLACES, Tiles, Glazed, Manufactures, Kilns, Butane fired**

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**FIRES, Chemistry**

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**FIRES, Ducts, Air conditioning, Office buildings.** See **OFFICE BUILDINGS, Air conditioning, Ducts, Fires**

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**FIRES, Motor boats.** See **BOATS, Motor, Fires**

**FIRES, Passenger ships.** See **SHIPS, Passenger, Fires**

**FIRES, Petroleum.** See **PETROLEUM, Fires**

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FLAMEPROOFING

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- FIRES, Ventilation.** See **VENTILATION, Fires**
- FIRES, Vertical car parks.** See **CAR PARKS, Vertical, Fires**
- FIRES, Warehouses, Storage, Motor car parts.** See **MOTOR CARS, Parts, Storage, Warehouses, Fires**
- FIRES, Wood manufactures.** See **WOOD, Manufactures, Fires**
- FIREWORKS.** See **PYROTECHNICS**
- FIRING, Celadon glazes, Porcelain.** See **PORCELAIN, Glazes, Celadon, Firing**
- FIRING, Glazed pottery.** See **POTTERY, Glazed, Firing**
- FIRING, Silicon controlled rectifiers.** See **RECTIFIERS, Silicon controlled, Firing**
- FIRING, Tunnel kilns, Bricks.** See **BRICKS, Kilns, Tunnel, Firing**
- FISCHER REAGENTS, Titrations, Moisture determination.** See **MOISTURE, Determination, Titrations, Karl Fischer reagents**
- FISCHER REAGENTS, Titrations, Surface moisture determination, White sugar.** See **SUGAR, White, Surface moisture, Determination, Titrations, Karl Fischer reagents**
- FISCHER-TROPSCH PROCESS, Hydrocarbon production.** See **HYDROCARBONS, Production, Fischer-Tropsch process**
- FISCHER TROPSCH PROCESS, Organic chemicals production.** See **ORGANIC CHEMICALS, Production, Fischer Tropsch process**
- FISH**  
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 CATFISH  
 COD  
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 STROMATEUS CINEREUS  
 TROUT  
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 YELLOW TAILS
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**FISHING**

Related Headings:  
COD, Fishing  
HERRINGS, Fishing  
SALMON, Fishing  
SEINING  
SHELLFISH  
TUNAS, Fishing

**FISHING—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

*Education*  
*Research*  
*Industry*  
*International law*  
*Territorial limits*

*Problems*  
*Pests*

*Equipment*  
*Lines*  
*Vessels*

*Activities*  
*Echo sounding*

*Types of fishing*  
*Electrical*

**FISHING, Echo-sounding**

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Physics applied to echo sounding for fish. R. W. G. Haslett. *Ultrasonics*, 2 (Jan/Mar 64) p.11-22. il. refs.

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**FISHING, Industry, Ireland**

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**FISHING, Sprats. See SPRATS, Fishing****FISHING, Territorial limits**

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LOBSTERS, Fishing, Vessels  
 SEINERS  
 TRAWLERS  
 SUBMARINES (Fishery research)  
 TRAWLERS  
 TUNAS, Fishing, Vessels

**FISHING, Vessels, Decked, Engines**

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**FISHING, Vessels, Engines, Outboard, Underdeveloped countries**

Impact of outboard mechanization on developing fisheries. J. O. Traung. *Fishing News International*, 3 (Jan/Mar 64) p.3+. il.  
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Manoeuvring aids for fishing vessels. *World Fishing*, 13 (May 64) p.48-9

**FISHING, Vessels, Propellers, Transverse**

Manoeuvring aids for fishing vessels. *World Fishing*, 13 (May 64) p.48-9

**FISHING, Vessels, Refrigerated**

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**FISHMOOR**

See

WATER, Engineering, Fishmoor

**FISSION, Fuels, Nuclear reactors. See NUCLEAR REACTORS, Fuels, Fission****FISSION, Plutonium-239. See PLUTONIUM-239, Nuclei, Fission****FISSION, Plutonium-240. See PLUTONIUM-240, Nuclei, Fission****FISSION, Spontaneous, Transuranium element synthesis. See TRANSURANIUM ELEMENTS, Synthesis, Spontaneous fission****FISSION, Uranium-235. See URANIUM-235, Nuclei, Fission****FISSION FRAGMENTS, Irradiation, Detonation, Explosives. See EXPLOSIVES, Detonation, Irradiation (Fission fragments)****FISSION NEUTRONS, Fuels, Nuclear reactors. See NUCLEAR REACTORS, Fuels, Fission neutrons****FISSION PRODUCTS, Wastes, Nuclear reactors. See NUCLEAR REACTORS, Wastes, Fission products****FITTING OUT, Shipbuilding. See SHIPBUILDING, Fitting out****FITTINGS, Fluorescent lamps. See LAMPS, Fluorescent, Fittings****FITTINGS, Pipes, Water. See WATER, Pipes, Fittings****FITTINGS, Plumbing. See PLUMBING, Fittings****FITTINGS, Retail shops. See SHOPS (Retail) Fittings****FIXED BED CATALYTIC CHEMICAL REACTORS. See****CHEMICAL REACTORS, Catalytic, Fixed bed****FIXING, Photography. See PHOTOGRAPHY, Fixing****FIXTURES, Drilling. See DRILLING, Fixtures****FIXTURES, Indexing. See INDEXING, Fixtures****FIXTURES, Machine tools**

Universal tooling for NC [Kearney & Trecker Milwaukee-matic] R. J. Klubertanz. *Metalworking Production*, 108 (15 Apr 64) p.57-60. il.

**FIXTURES, Marking, Indicators, Instruments. See INSTRUMENTS, Indicators, Marking, Fixtures****FIXTURES, Milling. See MILLING, Fixtures****FIXTURES, Thermoplastics, Lapping, Cores, Transformers. See TRANSFORMERS, Cores, Lapping, Fixtures, Thermoplastics****FLAIL GRASS CUTTING MACHINES. See GRASS, Cutting, Machines, Flail****FLAIL HARVESTERS. See HARVESTERS, Flail****FLAME CUTTING**

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Technical centre for B.O.C. *Iron & Steel*, 37 (Apr 64) p.155-6. il.

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**FLAME CUTTING, Machines, Carriages, Rail mounted**

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**FLAME CUTTING, Oxy-arc, Machines**

Improvised oxy-arc cutting torch. *Welding & Metal Fabrication*, 32 (Jun 64) p.238-9. il.

**FLAME CUTTING, Oxy-gas**

Thoughts on high speed oxygen cutting. K. D. S. Semper. *Welding & Metal Fabrication*, 32 (Jul 64) p.263-5. il.

**FLAME CUTTING, Oxy-gas, Machines**

Hancock Han-co-sine flame profiling machine. G. W. Mason & A. J. Barker. *Machinery*, 105 (22 Jul 64) p.265-6. il. Profile flame cutting machine. *Engineer*, 217 (1 May 64) p.788. il.

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First British ratio cutting machine [Hancock Han-co-sine] Process Control & Automation, 11 (Aug 64) p.352-3. il. Ratio cutting machine uses new control principle. *Welding & Metal Fabrication*, 32 (Jun 64) p.237. il.

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**FLAME CUTTING, Shipbuilding. See SHIPBUILDING, Flame cutting****FLAME GOUGING, Plasma arc**

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**FLAME IONISATION, Detectors, Capillary columns, Gas chromatography, Petroleum. See PETROLEUM, Gas chromatography, Columns, Capillary, Detectors, Flame ionisation****FLAME JET-PIERCING, Rock. See ROCK, Jet-piercing, Flame****FLAME PHOTOMETRY. See PHOTOMETRY, Flame****FLAME PHOTOMETRY, Alkali extraction measurements, Acid resistance determination, Alumino-silicate glass. See GLASS, Alumino-silicate, Acid resistance, Determination, Alkalies, Extraction, Measurements, Flame photometry**



- FLAME PHOTOMETRY**, Alkali extraction measurements, Acid resistance determination, Borosilicate glass. See **GLASS**, Borosilicate, Acid resistance, Determination, Alkalies, Extraction, Measurements, Flame photometry
- FLAME PHOTOMETRY**, Alkali extraction measurements, Acid resistance determination, Soda-Lime-Silica glass. See **GLASS**, Soda-Lime-Silica, Acid resistance, Determination, Alkalies, Extraction, Measurements, Flame photometry
- FLAME PHOTOMETRY**, Calcium determination. See **CALCIUM**, Determination, Flame photometry
- FLAME PHOTOMETRY**, Calcium determination, Phosphoric acid. See **PHOSPHORIC ACID**, Determination of calcium, Flame photometry
- FLAME PHOTOMETRY**, Evaporation control, Sea water, Salt production. See **SALT**, Production, Sea water, Evaporation, Control, Flame photometry
- FLAME PHOTOMETRY**, Phosphates, Rock. See **ROCK**, Phosphates, Photometry, Flame
- FLAME PLATING**, Machines  
Effective tooling for flame plating. F. F. Humbarger. *Machinery*, 104 (27 May 64) p.1204-9. il.
- FLAME PROOF**. See **FLAMEPROOF**
- FLAME RESISTANCE**, Composite columns. See **COLUMNS**, Composite, Fire resistance
- FLAME RESISTANCE**, Composite structures. See **STRUCTURES**, Composite, Flame resistance
- FLAME RESISTANCE**, Fabrics. See **FABRICS**, Flame resistance
- FLAME RESISTANCE**, Latex bonding, Hair fibres. See **HAIR FIBRES**, Bonding, Latex, Flame resistant
- FLAME RESISTANCE**, Latex bonding, Hair fibres, Upholstery. See **UPHOLSTERY**, Hair fibres, Bonding, Latex, Flame resistant
- FLAME RESISTANCE**, Wood, Structures. See **STRUCTURES**, Timber, Fire resistance
- FLAME RESISTANT FLUIDS**, Hydraulic machinery. See **HYDRAULIC MACHINERY**, Fluids, Fire resistant
- FLAME RESISTANT FLUIDS**, Hydraulic machinery, Coal mining. See **COAL**, Mining, Hydraulic machinery, Fluids, Fire-resistant
- FLAME RESISTANT LUBRICATING OILS**. See **LUBRICATING OILS**, Flame resistant
- FLAME RESISTANT LUBRICANTS**, Gas turbines. See **GAS TURBINES**, Lubricants, Flame resistant
- FLAME RESISTANT LUBRICANTS**, Steam turbines. See **STEAM**, Turbines, Lubricants, Flame resistant
- FLAME RESISTANT MATERIALS**, Bulkheads, Ships. See **SHIPS**, Bulkheads, Materials, Fire resistant
- FLAME SPRAYING**, Alumina ceramics. See **ALUMINA**, Ceramics, Spraying, Flame
- FLAME SPRAYING**, Aluminium-Nickel, Powders, Coatings. See **COATINGS**, Powders, Aluminium-Nickel, Spraying, Flame
- FLAME SPRAYING**, Metals. See **METALS**, Spraying, Flame
- FLAME SPRAYING**, Powders, Coatings. See **COATINGS**, Powders, Spraying, Flame
- FLAMEPROOF ENCLOSURES**, Electrical equipment. See **ELECTRICAL EQUIPMENT**, Flameproof enclosures
- FLAMEPROOF FINISHES**, Cellulosic fabrics. See **FABRICS**, Cellulosic, Finishes, Flameproof
- FLAMEPROOFING**, Wood. See **WOOD**, Flameproofing
- FLAMES**, Aerated, Burners, Natural gas. See **GAS**, Natural, Burners, Flames, Aerated
- FLAMES**, Ammonia-Nitrous oxide, Propagation, Speed, Measurement  
Combustion of ammonia supported by oxygen, nitrous oxide or nitric oxide: laminar flame propagation at low pressures in binary mixtures. D. G. R. Andrews & P. Gray. *Combustion & Flame*, 8 (Jun 64) p.113-26. il. refs.
- FLAMES**, Ammonia-Oxygen, Propagation, Speed, Measurement  
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- FLAMES**, Benzene-Air, Soot, Studies, Light scattering  
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- FLAMES**, Coal, Pulverised, Diffusion, Temperature distribution  
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- FLAMES**, Diffusion, Heights  
Linear flame heights for various fuels. F. R. Steward. *Combustion & Flame*, 8 (Sep 64) p.171-8. il. refs.
- FLAMES**, Diffusion, Laminar, Polycyclic aromatic compound formation, Effect of additives  
Polycyclic aromatic hydrocarbons from diffusion flames and diesel combustion. S. K. Ray & R. Long. *Combustion & Flame*, 8 (Jun 64) p.139-51. il. refs.
- FLAMES**, Dimethyl hydrazine-Nitrous oxide, Laminar, Propagation, Speed, Determination  
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- FLAMES**, Dimethyl hydrazine-Oxygen, Laminar, Propagation, Speed, Determination  
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- FLAMES**, Hydrocarbons-Air, Diffusion, Laminar, Opposed jet, Inhibitors, Studies, Spectroscopy  
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- FLAMES**, Hydrocarbons-Air, Propagation, Speed, Flashback gradient, Effect of hydrogen  
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- FLAMES**, Hydrogen-Air, Methane diffusion flames. See **FLAMES**, Methane, Diffusion (Flames, Hydrogen-Air)
- FLAMES**, Hydrogen-Air, Propagation, Speed, Effect of inhibitors, Methyl bromide  
Flame inhibition by methyl bromide. C. P. Fenimore & G. W. Jones. *Combustion & Flame*, 7 (Dec 63) p.323-9. refs.

**FLAMES, Hydrogen-Oxygen, Additives, Trimethyl phosphate, Combustion gases, Spectrophotometry**

Phosphorus in the burnt gas from fuel-rich hydrogen-oxygen flames. C. P. Fenimore & G. W. Jones. *Combustion & Flame*, 8 (Jun 64) p.133-7. il. refs.

**FLAMES, Hydrogen-Oxygen-Nitrogen, Low temperature, Free radicals recombination, Determination, Lead (Atomic) Chemiluminescence**

Burning velocity and free radical recombination rates in low temperature hydrogen flames, pt.2: rate constants for recombination reactions. J. L. J. Rosenfeld & T. M. Sugden. *Combustion & Flame*, 8 (Mar 64) p.44-50. il. refs.

**FLAMES, Hydrogen-Oxygen-Nitrogen, Low temperature, Spectrophotometry**

Burning velocity and free radical recombination rates in low temperature hydrogen flames, pt.1: the measurement of temperature and burning velocity. J. L. J. Rosenfeld & T. M. Sugden. *Combustion & Flame*, 8 (Mar 64) p.37-43. il. refs.

**FLAMES, Kerosine-Air, Stability**

Maximum stability characteristics of a simple flameholder in high velocity gaseous and liquid fuel/air streams. P. G. Walburn. *Aeronautical Q.*, 15 (Nov 64) p.381-91. il. refs.

**FLAMES, Methane, Diffusion, (Flames, Hydrogen-Air)****Stability**

Stability of a diffusion flame burning in products of combustion. D. Choulis & M. J. G. Wilson. *Combustion & Flame*, 7 (Dec 63) p.369-74. il. refs.

**FLAMES, Non-aerated, Burners, Town gas. See GAS (Town) Burners, Flames, Non-aerated****FLAMES, Propagation, Speed, Limits, Eigenvalues**

On the theory of flammability limits. J. F. Wehner. *Combustion & Flame*, 7 (Dec 63) p.309-13. refs.

**FLAMES, Propane-air, Sodium salt deposits, Coal fired furnaces. See FURNACES, Coal fired, Sodium salt deposits, Propane-air flames****FLAMES, Propane-Air, Stability**

Maximum stability characteristics of a simple flameholder in high velocity gaseous and liquid fuel/air streams. P. G. Walburn. *Aeronautical Q.*, 15 (Nov 64) p.381-91. il. refs.

**FLAMES, Seeded (Potassium) Electrical conductivity**

On the electrical conductivity of seeded air combustion products. D. V. Freck. *Brit. J. of Applied Physics*, 15 (Mar 64) p.301-10. il. refs.

**FLAMMABLE ATMOSPHERES, Electrical installations. See ELECTRICAL INSTALLATIONS, Flammable atmospheres****FLAMMABLE ATMOSPHERES, Lighting. See LIGHTING, Flammable atmospheres****FLAMMABLE GASES. See GASES, Flammable****FLAPS, Stopping, Ships. See SHIPS, Stopping, Flaps****FLANGE FORCES, Wheels, Wagons, Railways. See RAILWAYS, Wagons, Wheels, Flange forces****FLANGED BOLTED JOINTS. See JOINTS, Bolted, Flanged****FLANGED JOINTS, Pipes. See PIPES, Joints, Flanged****FLAPS, Wings, Short take-off aircraft. See AIRCRAFT, Short take-off, Wings, Flaps****FLAPS, Wings, Vertical take-off aircraft. See AIRCRAFT, Vertical take-off, Wings, Flaps****FLARE, Lenses, Process cameras. See PROCESS CAMERAS, Lenses, Flare****FLASH AGEING, Printing fabrics. See FABRICS, Printing, Flash ageing****FLASH BOILERS. See BOILERS, Flash****FLASH DRYING, Mechanical pulp. See PULP, Mechanical, Drying, Flash****FLASH EVAPORATORS, Concentration, Yeast extracts. See YEAST, Extracts, Concentration, Flash evaporators****FLASH HEATING, Carbonisation, Coal. See COAL, Carbonisation, Flash heating****FLASH IRRADIATION, Double layer mercury cathodes. See CATHODES, Mercury, Double layer, Flash irradiation****FLASH PHOTOLYSIS, Alkyl nitrates, Alkoxyis. See**

ALKOXYLS, Alkyl nitrates, Flash photolysis

**FLASH PHOTOLYSIS, Coal. See COAL, Photolysis, Flash****FLASH RADIOGRAPHY. See RADIOGRAPHY, Flash****FLASHINGS, Tiles, Cladding, Housing. See HOUSING, Cladding, Tiles, Flashings****FLASHLIGHT PHOTOGRAPHY. See PHOTOGRAPHY, Flashlight****FLASHOVER, Polluted insulators, Electric power systems.**

See ELECTRIC POWER SYSTEMS, Insulators, Polluted, Flashover

**FLASHOVER, Wet, Insulators. See INSULATORS, Flashover, Wet****FLATNESS, Optical. See OPTICAL FLATNESS****FLATS**

Multi-storey flats: design, building methods and costs: observations and conclusions from BRS study. Builder, 207 (18 Sep 64) p.607-11. il.

Tall flats: factors affecting construction and design.

G. Brock. *Structural Concrete*, 2 (Mar/Apr 64) p.65-71. refs.

**FLATS**

Related Headings:

MAISONNETTES

**FLATS-SUBHEADINGS-Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

**Particular localities****Great Britain****London**

*Camberwell*

*Finsbury*

*Kensington*

*Hampstead*

*St. Pancras*

*Westminster*

*Paddington*

*Woolwich*

*Willesden*

*Leyton*

*Ashford (Middlesex)*

*Woking*

*Bracknell*

*Canterbury*

*Margate*

*Torquay*

*Bristol*

*Smethwick*

*Walsall*

*Cambridge*

*Eccles*

*Usworth*

*Scotland*

*Galashiels*

*Glasgow*

**Austria**

*Innsbruck*

**France**

*Briey-en-foret*

*Cannes*

**Italy**

*Rome*

*Milan*

*Udine*

*Trieste*

**Spain**

*Barcelona*

**Israel****U.S.A.**

*Chicago*

## FLATS—SUBHEADINGS, Synopsis—cont.

## Problems

Fire hazards

## Technical operations

Prefabrication

Jackblock construction

Sector construction

## Parts

Panels

Doors

Bathrooms

Water-closets

## Services

Engineering services

Heating

Electrical installations

Lifts

Refuse containers

Refuse collection

Refuse disposal

Refuse incinerators

## Types of flats

By occupant

Old people

## Precincts

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FLAVYLIUM SALTS

VITEXIN

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DIHYDROFLAVONOLS

**FLAVOURING MATERIALS, Butter. See BUTTER, Flavouring materials****FLAVOURING MATERIALS, Food. See FOOD, Flavouring materials****FLAVOURS, Metallic, Canned food. See FOOD, Canned, Flavours, Metallic****FLAVOURS, Orange oil. See ORANGE OIL, Flavours****FLAVOURS, Soft drinks. See DRINKS, Soft, Flavours****FLAVOURS, Tea. See TEA, Flavours****FLAVYLIUM SALTS, Condensation reactions with phloroglucinol**

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**FLEECE KNITTED ACRILAN FABRICS. See FABRICS, Acrilan, Knitted, Fleece****FLEECE TUFTED MAN-MADE FIBRES, Fabrics. See FABRICS, Man-made fibres, Tufted, Fleece****FLEET AIR ARM**

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FLEXURAL VIBRATIONS, Rectangular plates. See PLATES, Rectangular, Vibrations, Flexural  
 FLIES, Filtration, Sewage treatment. See SEWAGE, Treatment, Filtration, Flies  
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#### FLIGHT SIMULATORS

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FLOATING DRY DOCKS. See DOCKS, Dry, Floating

FLOATS, Water drain valve, Pneumatic machinery

See PNEUMATIC MACHINERY, Water drain valves, Floats

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FLOCKING, Electrostatic, Fabrics. See FABRICS, Flocking, Electrostatic

FLOCKING, Electrostatic, Man-made fibres, Fabrics. See FABRICS, Man-made fibres, Flocking, Electrostatic

FLOODLIGHTING, Buildings. See BUILDINGS, Floodlighting

FLOODLIGHTING, Football grounds. See FOOTBALL GROUNDS, Floodlighting

FLOODLIGHTING, Sports grounds. See SPORTS GROUNDS, Floodlighting

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See

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**FLOTATION**

Related Headings:

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FLOTATION, Antimony ores. See **ANTIMONY, Ores, Flotation**

FLOTATION, Beryl. See **BERYL, Flotation**

FLOTATION, Coal. See **COAL, Flotation**

FLOTATION, Fluorspar. See **FLUORSPAR, Flotation**

FLOTATION, Fluorspar separation, China stone. See **CHINA STONE, Fluorspar separation, Flotation**

FLOTATION, Galena. See **GALENA, Flotation**

FLOTATION, Haematite. See **HAEMATITE, Flotation**

FLOTATION, Mineral dressing. See **MINERAL DRESSING, Flotation**

FLOTATION, Ores, Copper. See **COPPER, Ores, Flotation**

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**FLOUR**

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- FLOW, Corrugated pipes. See PIPES, Corrugated
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- FLOW, Extrusion. See EXTRUSION, Flow
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- FLOW, Helical, Non-Newtonian fluids. See FLUIDS, Non-Newtonian, Flow, Helical
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**FLUE DUST, Pulverised coal boilers.** See **BOILERS, Coal, Pulverised, Flue dust**

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**FLUIDS, Flow, Impellers, Centrifugal pumps.** See **PUMPS, Centrifugal, Impellers, Flow**

**FLUIDS, Flow, Measurement**

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FLOWMETERS  
PITOT TUBES

**FLUIDS, Flow, Orifice plates.** See **ORIFICE PLATES, Flow**

**FLUIDS, Flow, Package dyeing, Cellulosic yarns.** See **YARNS, Cellulosic, Dyeing, Package, Fluid flow**

**FLUIDS, Flow, Packed beds.** See **PACKED BEDS, Fluid flow**

**FLUIDS, Flow, Parallel discs.** See **DISCS, Parallel, Flow**

**FLUIDS, Flow, Perforated pipes.** See **PIPES, Perforated, Flow**

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**LUBRICATING OILS, Spectroscopy, X-ray fluorescence**

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See AIRCRAFT, Supersonic, Structures, Panels, Oblique, Flutter

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REACTORS, Neutrons, Flux

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- FOAMED POLYMERS.** See **POLYMERS**, Expanded
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- FOIL, Nickel, Curved, Electroforming**  
Electroplate-forming large foil-thin parts. R. A. Botosan. Metalworking Production, 108 (15 Jan 64) p.56-7. il.
- FOIL, Nickel, Microscopy, Electron, Transmission, Bragg reflection, Effect of magnetic domains**  
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**FOIL, Nickel, Torsion, Hot, Studies, Electron microscopy, Transmission**

Substructure formation in aluminium, copper, and nickel foils. L. E. Murr. *Applied Materials Research*, 3 (Jul 64) p.153-8. il. refs.

**FOIL, Steel, Coatings, Tin**

U.S. launches tinplate "foil." Tin (Jun 64) p.145-6. il.

**FOIL, Steel, Stainless, Dislocations, Studies, Microscopy, Electron**

Comparison of dislocation arrangements in stainless steel during deformation at high temperatures and high strain rates. H. Ormerod & W. J. McG. Tegart. *J. of Inst. of Metals*, 92 (May 64) p.297-9. il. refs.

**FOKKER F-28 FELLOWSHIP AIRCRAFT. See AIRCRAFT, Types, Fokker F-28 Fellowship****FOLDED PLATES, Roofs. See ROOFS, Plates, Folded****FOLDED WOOD PLATES, Roofs, Halls, Schools. See**

Schools, Halls, Roofs, Plates, Wood, Folded

**FOLDING, Machines, Paper. See PAPER, Folding, Machines****FOLKESTONE**

See

TOWN PLANNING, Folkestone

**FOOD**

Robert Whymper. Obituary. F. E. Thomas. *Chemistry & Industry*, (11 Jan 64) p.63

Why eat that? A. L. Bacharach. *Chemistry & Industry* (29 Aug 64) p.1519-21. refs.

**FOOD**

Related Headings:

ALGAE  
BAKERIES  
BAKERY PRODUCTS  
CASSAVA  
CHICK PEAS  
DAIRY INDUSTRY  
EGGS  
FISH  
FRUIT  
GLYCEROL, Food  
GRAIN  
GROCERIES  
HONEY  
ICE CREAM  
ICES  
MACARONI  
MEAT  
MILK  
OILS, Edible  
POULTRY  
RICE PUDDINGS  
SEA FOOD  
SOUPS  
SOYA BEANS  
STARCH, Maize, Food  
SUGAR  
SUGARS  
SWEETS  
VEGETABLES  
VITAMINS

**FOOD-SUBHEADINGS-Synopsis-cont.**

Properties

Chemistry

Volatile compounds

Technical activities

Sensory testing

Analysis

Determination of....

Inspection

Processing

Preservation

Preservatives

Freezing

Freeze-drying

Drying

Sterilisation

Irradiation

Packaging

Labels

Containers

Canning

Cans

Weighing machines

Storage

Transport

Additives

Flavouring materials

Sweeteners

Colouring agents

Types of food

Irradiated

Pre-cooked

Canned

Frozen

Freeze-dried

Dried

Baby

Resources

**FOOD, Additives, Regulations**

Food additives: categorised for safety and permissibility under U.K. and U.S.A. food laws. E. O. G. Batchelor-Williams. *Food Trade Rev.*, 34 (Jun 64) p.48-51

**FOOD, Analysis**

Changing aspects of food and drug control. L. E. Colés. *R. Soc. of Health J.*, 84 (Mar/Apr 64) p.101+. il. refs.

**FOOD (Baby)**

Related Headings:

MILK (Buffalo) Dried, Baby foods

**FOOD (Baby) Processing**

Infant food in liquid form by Wyeth. *Manufacturing Chemist*, 35 (Jan 64) p.54-5. il.

Liquid baby food: production by Wyeth. *Food Manufacture*, 39 (Mar 64) p.48+. il.

**FOOD-SUBHEADINGS-Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

Research

Problems

Hygiene

Contamination

Toxicity

Browning

Rancidity



**FOOD, Browning, Non enzymic**

Non-enzymic browning; the role of unsaturated carbonyl compounds as intermediates and of  $\text{SO}_2$  as an inhibitor of browning. H. S. Burton, D. J. McWeeny & D. O. Biltcliffe. *J. of Science of Food & Agriculture*, 14 (Dec 63) p.911-20. refs.

**FOOD, Browning, Non-enzymic, Aldose-amino-compounds reactions**

Non-enzymatic browning: routes to the production of melanoidins from aldoses and amino-compounds. H. S. Burton & D. J. McWeeny. *Chemistry & Industry* (14 Mar 64) p.462-3. refs.

**FOOD, Browning, Non-enzymic, Inhibitors, Sulphites**

Mechanism of inhibition of non-enzymic browning by sulphite. E. F. L. J. Anet & D. L. Ingles. *Chemistry & Industry* (18 Jul 64) p.1319

**FOOD, Canned, Determination of tin, Dithiol, Emulsifiers**

Dispersing agents for the tin-dithiol complex. P. W. Board & R. G. P. Elbourne. *Analyst*, 89 (Aug 64) p.555-6. refs.

**FOOD, Canned, Flavours, Metallic**

Metallic taste. R. W. Moncrieff. *Perfumery & Essential Oil Record*, 35 (Mar 64) p.205-7. refs.

**FOOD, Canning**

Rapid canning process [Flash 18 developed by Swift & Co., U.S.A.] *Food Processing & Packaging*, 33 (May 64) p.186-8. il.

"Sub" for canned food processing [Flash 18 developed by Swift & Co.] *Tin* (Jul 64) p.177-8. il.

**FOOD, Canning, Microbiology**

Microbiology for the canner: examination of bacterial cultures (contd.) S. M. Charlett. *Canning & Packing*, 34 (Jan 64) p.13

Microbiology for the canner: examination of bacterial cultures (contd.) S. M. Charlett. *Canning & Packing*, 34 (Feb 64) p.12-13. il.

Microbiology for the canner: examination of bacterial cultures [contd.] S. M. Charlett. *Canning & Packing*, 34 (Mar 64) p.12

Microbiology for the canner: examination of bacterial cultures (contd.) S. M. Charlett. *Canning & Packing*, 34 (Apr 64) p.8

Microbiology for the canner: examination of bacterial cultures (contd.) S. M. Charlett. *Canning & Packing*, 34 (May 64) p.11

Microbiology for the canner: examination of bacterial cultures (contd.) S. M. Charlett. *Canning & Packing*, 34 (Jun 64) p.8

Microbiology for the canner: examination of bacterial cultures (contd.) S. M. Charlett. *Canning & Packing*, 34 (Jul 64) p.8

Microbiology for the canner: examination of bacterial cultures (contd.) S. M. Charlett. *Canning & Packing*, 34 (Aug 64) p.11

Microbiology for the canner: examination of bacterial cultures (contd.) S. M. Charlett. *Canning & Packing*, 34 (Sep 64) p.9. il.

Microbiology for the canner: examination of bacterial cultures (contd.) S. M. Charlett. *Canning & Packing*, 34 (Oct 64) p.10-11

Microbiology for the canner: examination of bacterial cultures (contd.) S. M. Charlett. *Canning & Packing*, 34 (Nov 64) p.12

Microbiology for the canner: examination of bacterial cultures (contd.) S. M. Charlett. *Canning & Packing*, 34 (Dec 64) p.10

**FOOD, Canning, Research**

When research is research. "Metalia". *Canning & Packing*, 34 (Aug 64) p.4

**FOOD, Cans**

Cans for the canning industry, pt.1: types of cans. *Tin & Its Uses*, no.63 (1964) p.8-10

Cans for the canning industry, pt.2: recommendations for handling, processing, and storage. *Tin & its Uses*, no.64 (1964) p.10-13

**FOOD, Cans, Cylindrical, Sizes**

Optimal dimensions for cylindrical can. R. V. Mallaya, J. R. King & S. Eilon. *Enginner*, 218 (27 Nov 64) p.881-4. il. ref.

Study of optimal dimensions of cylindrical cans. R. V. Mallaya, J. R. King & S. Eilon. *International J. of Production Research*, 3 no.1 (1964) p.35-49. il.

**FOOD, Cans, Manufactures**

Manufacture of food cans, pt.3: conclusion. G. W. Brown. *Tin & its Uses*, no.62 (1964) p.7-10. il.

Manufacture of food cans, pt.2: the can bodies. G. W. Brown. *Tin & Its Uses*, no.61 (1963) p.11-16. il.

**FOOD, Cans, Manufactures, Heating, Gas-fired**

Napoleon began canned food trend; extracts from "The challenge to Gas". A. L. Stuchbery. *Gas World*, 160 (15 Aug 64) p.23+

**FOOD, Cans, Staining, Sulphur**

Sulphur-staining in canned foods. D. Dickinson. *Food Manufacture*, 39 (Jan 64) p.32-4. il. refs.

**FOOD, Colouring agents**

Certified U.S. colours. R. Seiden. *Perfumery & Essential Oil Record*, 55 (May 64) p.335-7

Withdrawal of six food colours advised. *Dyer, Textile Printer, Bleacher & Finisher*, 132 (17 Jul 64) p.124

**FOOD, Colouring agents**

Related Headings:

CARAMEL

**FOOD, Containers, Foil, Aluminium**

Aluminium foil containers for efficient hygienic packaging.

*Aluminium Courier* (Dec 63) p.12-17. il.

Clean Pac aluminium foil container system. *Packaging*, 35 (Jul 64) p.64-7. il.

**FOOD, Containers, Gas packing**

Catalytically active printing ink and hydrogen promise new approach to gas packing. G. B. Cooper. *Food Manufacture*, 39 (Feb 64) p.49-50. refs.

**FOOD, Containers, Plastics, Reinforced**

Some problems associated with storage of foodstuffs in reinforced plastics containers. S. Oswitch. *Reinforced Plastics*, 8 (Jan 64) p.146-7

**FOOD, Containers, Polystyrene, Thermoformed**

Packaging of foodstuffs in thermoformed polystyrene containers. E. L. Williams. *Packaging*, 35 (Nov 64) p.101-2. il.

**FOOD, Contamination, Agricultural chemical residues**

Antibiotic, pesticide and other agricultural chemical residues in food. *Milling*, 143 (24 Jul 64) p.68+

**FOOD, Contamination, Eelworms**

Protozoa and nematodes as food contaminants. A. H. Walters. *Food Trade Rev.*, 34 (Oct 64) p.47-9

**FOOD, Contamination, Protozoa**

Protozoa and nematodes as food contaminants. A. H. Walters. *Food Trade Rev.*, 34 (Oct 64) p.47-9

**FOOD, Determination of fats**

Method for quantitatively isolated "hydrolysate lipids" from biological materials, and its use as a reference method for determining "fats" in foods. J. J. Wren & P. P. Wojtczak. *Analyst*, 89 (Feb 64) p.122-31. il. refs.

**FOOD, Determination of nisin**

Estimation of nisin on foods. J. Tramer & G. G. Fowler. *J. of Science of Food & Agriculture*, 15 (Aug 64) p.522-8. refs.

**FOOD, Determination of pesticide residues**

Pesticide residues in food. D. T. Lewis. R. Soc. of Health J., 84 (Jul/Aug 64) p.191-4. il. refs.

Residue data—definitions and presentation. J. A. R. Bates. Chemistry & Industry (21 Sep 64) p.1591-2. refs.

**FOOD, Determination of pesticide residues, Spectroscopy, Infra-red**

Use of infrared spectroscopy in the analysis of pesticide residues. N. T. Crosby & E. Q. Laws. Analyst, 89 (May 64) p.319-27. il. refs.

**FOOD, Determination of protein, Kjeldahl method, Fume disposal**

Simple Kjeldahl fume disposal devices. S. M. Charlett. Laboratory Practice, 13 (Mar 64) p.211-12. il. refs.

**FOOD, Dried**

Vesta complete dishes. Food Processing & Marketing, 33 (Oct 64) p.393-5. il.

**FOOD, Drying, Air**

No-heat drying plant in Switzerland. F. Lang. Food Manufacture, 39 (May 64) p.35-6. il.

**FOOD, Flavouring materials**

Changing face of the flavour industry. W. J. Downey & R. J. Eiserle. Manufacturing Chemist, 35 (Sep 64) p.66-7. il.

Flavour round-up: a literature survey. R. A. Webb. Food Manufacture, 39 (Jan 64) p.55+. refs.

Flavours and the law. C-A. Vodoz. Manufacturing Chemist, 35 (Sep 64) p.60-2

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Progress and problems in flavours. R. W. Moncrieff. Manufacturing Chemist, 35 (Sep 64) p.63+. refs.

**FOOD, Flavouring materials**

Related Headings:

CONDIMENTS

SPICES

**FOOD, Flavouring materials, Encapsulation**

Encapsulation of flavours. P. Moxey. Manufacturing Chemist, 35 (Sep 64) p.68-9

**FOOD, Freeze-dried**

AFD can help to economise on storage space for food. Shipping World, 150 (16 Apr 64) p.811

**FOOD, Freeze-dried, Packaging**

Packaging of freeze-dried foods. F. Fidler. Food Trade Rev., 34 (May 64) p.40-3. il. refs.

**FOOD, Freeze-dried, Reconstitution**

Rapid reconstitution of freeze-dried foods. F. Fidler. Food Manufacture, 39 (Jun 64) p.55. il. refs.

**FOOD, Freeze-drying**

Freeze-drying of foods—the latest position. D. B. Smith. Food Trade Rev., 34 (Jan 64) p.46-50. il.

Heat and mass flow. T. W. G. Rowe. Food Trade Rev., 34 (Feb 64) p.39-42. il. refs.

Pretreatment and freezing of foods for freeze-drying. E. J. Rolfe. Food Trade Rev., 34 (Mar 64) p.57-60. il.

**FOOD, Freeze-drying, Batch cabinets**

Batch cabinet design. K. Ward. Food Trade Rev., 34 (Apr 64) p.55-7. il.

**FOOD, Freeze-drying, Costs**

Fundamental economics of freeze-drying. K. Ward. Food Trade Rev., 34 (May 64) p.44+

**FOOD, Freeze-drying, Equipment**

Application of refrigeration in freeze-drying. A. P. Longmore. Food Trade Rev., 34 (Mar 64) p.55-7. il. refs.

Vacuum techniques. T. W. G. Rowe. Food Trade Rev., 34 (Feb 64) p.42-4. il. refs.

**FOOD, Freeze-drying, Equipment, Aluminium**

Freeze-drying of food. Aluminium Courier (Dec 63) p.20-1. il.

**FOOD, Freeze-drying, Tunnel**

Freeze-drying in tunnel systems. J. McNair Dalgleish. Food Trade Rev., 34 (Apr 64) p.57-60. il. refs.

**FOOD, Freeze-drying, U.S.A.**

Freeze-drying in the U.S.A. A. P. Longmore. Food Trade Rev., 34 (Jan 64) p.51+. il. refs.

**FOOD, Freezing, Fluidisation**

Fluidized beds: faster food freezing. Engineering, 198 (31 Jul 64) p.154. il.

Further development of Frigoscandia FloFreeze. Frozen Foods, 16 (Dec 63) p.827+. il.

Grimsby's New Fre-Flo freezing plant [Chr. Salvesen & Co. Ltd.] World Refrigeration, 15 (Aug 64) p.44-5. il.

New quick freezing project at Grimsby. Food Processing & Packaging, 33 (Aug 64) p.307-10. il.

Northern Cold Storage (Grimsby) Ltd. Food Trade Rev., 34 (Sep 64) p.54-6. il.

Salvesen's new building for fluidized freezing. Modern Refrigeration, 67 (Aug 64) p.798-800. il.

3 ton per hour freezing plant [Fre-Flo] Mass Production, 40 (Sep 64) p.65-6. il.

**FOOD, Freezing, Fluidisation, Equipment**

Further FLOFreeze developments by Frigoscandia. Modern Refrigeration, 67 (Jan 64) p.36+. il.

**FOOD, Frozen**

Easier-to-freeze tomato variety proves a success: apple growers enter concentrate field. Frozen Foods, 17 (Jan 64) p.30-1

Refrigeration for frozen foods in the retail trade. M. S. Ware. (extract) Modern Refrigeration, 67 (Jun 64) p.633-3. il.

Refrigeration for frozen foods in the retail trade (extracts) M. S. Ware. J. of Refrigeration, 7 (Sep/Oct 64) p.90-3. il. refs.

**FOOD, Frozen, Cartons, Paper board, Polythene coated**

American f.f. firms choose polyethylene-coated cartons. M. P. Renaud. Frozen Foods, 17 (Aug 64) p.498+

**FOOD, Frozen, Display cabinets**

Bright prospects for cabinet sales: all retailers will need better models. A. E. Hammond. Frozen Foods, 17 (Oct 64) p.654-6. il.

Display cabinet trends. World Refrigeration, 15 (May 64) p.31-2. il.

Display cabinets sell q.f. foods. A. E. Hammond. Frozen Foods, 17 (Jul 64) p.454-5. il.

Frozen food cabinets in Swedish grocery stores. Frozen Foods, 17 (Feb 64) p.88-9

More consideration needed when selecting cabinets: vertical models not only answer. A. E. Hammond. Frozen Foods, 17 (Sep 64) p.569-70. il.

More family shopping—but is this fact appreciated. A. E. Hammond. Frozen Foods, 17 (Mar 64) p.183-5. il.

Q.-f. foods in supermarkets. A. E. Hammond. Frozen Foods, 17 (Jun 64) p.369+. il.

Variety of low-temperature cabinets. A. E. Hammond. Frozen Foods, 17 (Nov 64) p.710-12. il.

**FOOD, Frozen, Display cabinets, Manufactures**

Craig-Nicol, Glasgow. Wm. Nicol. World Refrigeration & Air Conditioning, 15 (Jun 64) p.29-30. il.

Fabricating for the supermarkets [Craig-Nicol Ltd., of Glasgow] Welding & Metal Fabrication, 32 (May 64) p.184-5. il.

**FOOD, Frozen, Display cabinets, Plastics, Reinforced, Glass fibre**

Self-service cabinets in reinforced plastic: U.K. development. A. E. Hammond. Frozen Foods, 17 (Jan 64) p.49-51. il.

**FOOD, Frozen, Packaging**

Award-winning frozen food packages at American competition. Frozen Foods, 17 (May 64) p.300-1. il.

**FOOD, Frozen, Sweden**

Reasons for Swedish frozen food industry's growth. Froze Foods, 16 (Dec 63) p.853-4

**FOOD, Hygiene**

- Achievement—public health taken for granted. R. K. Crow. *Municipal Engng.*, 141 (11 Sep 64) p.1703+
- Food hygiene: future trends. L. H. Vale. *R. Soc. of Health J.*, 84 (Jul/Aug 64) p.185-90. il. refs.
- Food hygiene: standards in manufacture, retailing and catering. N. Goldenberg. *R. Soc. of Health J.*, 84 (Jul/Aug 64) p.195-201. il. refs.
- Is food poisoning inevitable? "Metalia". *Canning & Packing*, 34 (Jul 64) p.4

**FOOD, Inspection**

- Food protection. M. Parry. *Food Trade Rev.*, 34 (Nov 64) p.41
- Quality control. L. A. Warwicker. *Milling*, 143 (24 Jul 64) p.76-9. il.

**FOOD, Inspection, Quality scoring**

- How to improve sensory quality scoring procedures by objective weighting. D. J. Tilgner. *Food Manufacture*, 39 (Aug 64) p.34+. il. refs.

**FOOD, Irradiated, Packaging, Plastics**

- Flexible plastics containers for irradiated foods. *Applied Plastics*, 7 (Aug 64) p.45

**FOOD, Irradiation**

- Partial Ministry blessing on irradiation of food. *Municipal Engng.*, 141 (30 Oct 64) p.2091
- Preserving food by nuclear radiation. P. M. Smith. *World Refrigeration*, 15 (Aug 64) p.34+. il.
- Preserving in the can—without cooking. *Tin* (Mar 64) p.59-60. il.
- Tentative classification of food irradiation processes with microbiological objectives. M. Ingram & others. *Nature*, 204 (17 Oct 64) p.237-8. ref.

**FOOD, Irradiation, Gamma rays**

- Gamma-ray irradiation treatment of foodstuff products. *Packaging*, 35 (Jun 64) p.114-15
- Mobile cobalt-60 source. *Food Processing & Packaging*, 33 (Apr 64) p.149-50. il.

**FOOD, Labels**

- Food labelling: a new approach. W. M. Shortt. *R. Soc. of Health J.*, 84 (Jan/Feb 64) p.42-4. il.
- Food labels. M. Pyke. *R. Inst. of Chemistry J.*, 88 (Nov 64) p.375
- Private labels versus national brands: packers differ on important question. *Frozen Foods*, 17 (Nov 64) p.704+. il.

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- Control sought over type-style, size and layout of food labels. *Packaging Rev.*, 84 (Oct 64) p.34-6

**FOOD, Packaging**

- Changing packaging scene. W. Richards. *Tin-Printer & Box Maker*, 40 (Mar 64) p.2
- Current aids to wrapping, labelling and sealing foodstuffs. F. T. Day. *Food Trade Rev.*, 34 (May 64) p.47-8
- Current trends in produce prepackaging. P. Seary. *Food Manufacture*, 39 (Sep 64) p.83+. il.

**FOOD, Packaging, Barrier wrappings**

- Functional barrier papers for food packaging. F. T. Day. *Food Trade Rev.*, 34 (Sep 64) p.57-8. il.

**FOOD, Packaging, Bulk**

- Food in bulk. *Packaging Rev.*, 84 (Mar 64) p.30-1
- Future scope of packaging of bulk foodstuffs. M. Parry. *Food Trade Rev.*, 34 (Apr 64) p.61+

**FOOD, Packaging, Film, Cellulose acetate**

- Packaging food in cellulose acetate film. J. G. Kennedy. *Food Manufacture*, 39 (Sep 64) p.79-81. il.

**FOOD, Packaging, Film, Plastics**

- Growing use of transparent film packaging. *Food Trade Rev.*, 34 (Jan 64) p.81-2. il.

**FOOD, Packaging, Film, Plastics, Costs**

- Plastic films for food packaging, pt.9: the cost of packaging food in plastic films. J. G. Kennedy. *Food Manufacture*, 39 (Jan 64) p.36-8. il.

**FOOD, Packaging, Film, Polyester**

- Polyester film for food packaging. T. C. Stening. *Food Processing & Packaging*, 33 (May 64) p.177-80. il.

**FOOD, Packaging, Film, Thermoplastics, Shrinkable**

- Shrink-wrapping foods. *Applied Plastics*, 7 (Mar 64) p.28
- Shrink wrapping of fresh and processed foods, pt.1: film materials. *Packaging Rev.*, 84 (Feb 64) p.34-6. il.

**FOOD, Packaging, Materials, Odour**

- Odour hazards in food packaging. H. G. Harvey. *Food Manufacture*, 39 (Feb 64) p.46-9. refs.

**FOOD, Packaging, Materials, Permeability, Gases**

- Gas permeability of packages. H. J. Lelie. *Packaging*, 35 (Feb 64) p.64-7. il. refs.

**FOOD, Packaging, Materials, Printing, Odours**

- Recent developments in the control of food wrappers. *Packaging*, 35 (Oct 64) p.91+

**FOOD, Packaging, Netherlands**

- Packaging in the Netherlands. C. Hellenius. *World's Paper Trade Rev.*, 162 (10 Sep 64) p.778+

**FOOD, Packaging, Plastics, Ultraviolet absorbers, Determination**

- Identification of ultra-violet absorbers in plastic materials. R. F. van der Heide. *Packaging*, 35 (Mar 64) p.67-8. refs.

**FOOD, Packaging, Sensory testing**

- Applications of the flavour profile to food and beverage packaging problems. F. Sullivan & J. F. Caul. *Laboratory Practice*, 13 (Jul 64) p.625+. il. refs.

**FOOD, Packaging, Thermoplastics, Pigments**

- Pigments for packaging foodstuffs. R. J. Gardner. *Plastics*, 29 (Jun 64) p.74-5. refs.

**FOOD, Packaging, U.S.A.**

- Food packaging in the U.S.A. *Food Processing & Packaging*, 33 (Jan 64) p.22-4. il.

**FOOD, Pre-cooked, Microwave heating**

- Microwave food-heating for auto-vending. B. Thatcher. *Packaging*, 35 (Jun 64) p.78-80

**FOOD, Preservation, History**

- History of food preservation, pt.1: the social background (contd.) V. J. M. Bryant. *Canning & Packing*, 34 (Jan 64) p.6-7. refs.
- History of food preservation, pt.1: the social background (contd.) V. J. M. Bryant. *Canning & Packing*, 34 (Mar 64) p.13
- History of food preservation, pt.1: the social background. [contd.] V. J. M. Bryant. *Canning & Packing*, 34 (Apr 64) p.6
- History of food preservation, pt.1: social background (contd.) V. J. M. Bryant. *Canning & Packing*, 34 (May 64) p.7. il.
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- History of food preservation, pt.1: social background (contd.) V. J. M. Bryant. *Canning & Packing*, 34 (Jul 64) p.7
- History of food preservation, pt.2: preservation by storage. V. J. M. Bryant. *Canning & Packing*, 34 (Aug 64) p.8-9. il.
- History of food preservation, pt.2: preservation by storage. V. J. M. Bryant. *Canning & Packing*, 34 (Sep 64) p.6-7
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**FOOD, Preservation, Sensory testing**

- Tasting tests in the C.S.I.R.O., Australia. E. M. Christie. *Laboratory Practice*, 13 (Jul 64) p.630-7. il. refs.

**FOOD, Preservatives, Regulations, Europe**

- Common Market legislation on preservatives. *Food Manufacture*, 39 (Jun 64) p.63+
- Food preservative regulations for the E.E.C. E. P. Fagerberg. *Food Trade Rev.*, 34 (May 64) p.37-9



**FOOD, Processing, Computers**

Digital computer control: its application in the food industry. J. A. Freer. *Food Processing & Packaging*, 33 (Jun 64) p.219-23. il.

**FOOD, Processing, Conveyors**

Notes on package handling. H. W. Gregory. *Food Trade Rev.*, 34 (May 64) p.51-4. il.

**FOOD, Processing, Education**

Science, food science and further education. Modern Refrigeration, 67 (Aug 64) p.830-1

**FOOD, Processing, Equipment, Cleaning**

Cleaning as a production problem in the food industries. R. Spencer. *International J. of Production Research*, 2 (Sep 63) p.205-12. il. refs.

**FOOD, Processing, Europe**

Food technology in Europe (summary) Food Group Symposium. *Chemistry & Industry* (18 Jul 64) p.1291-304

**FOOD, Processing, Factories**

Danish food factories—Carlsberg Brewery—Copenhagen slaughterhouse—Co-operative factory. P. F. Brooks. *Food Trade Rev.*, 34 (Aug 64) p.42-5. il.  
New food factory buildings in the U.K. *Food Trade Rev.*, 34 (Jul 64) p.52-5. il.  
Plant and offices for Thomas J. Lipton Ltd., Bramalea, Ontario. *Architectural Design*, 34 (Jul 64) p.341. il.

**FOOD, Processing, Factories, Floors**

Floors in food plants: summary of "What you should know about tile and brick floors". K. Harrison & A. S. Read. *Building Materials. Floors*, 24 (Mar 64) p.11+. il.

**FOOD, Processing, Fluidisation**

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BOTTLES, Closures, Sleeves, Aluminium, Forming

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Circular, Forming

**FORMING, Cold, Metals. See METALS, Forming, Cold****FORMING, Cold, Metals, Tubes, Boosters, Vehicles, Astronautics. See ASTRONAUTICS, Vehicles, Boosters, Tubes,**

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AUDIO FREQUENCY

VOICE FREQUENCY

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**FREQUENCY; Channels, Radio telescopes.** See **TELESCOPES, Radio, Frequency allocation**

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- FREQUENCY FILTERS.** See **FILTERS, Frequency**
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FRUIT  
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- APPLES  
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BLACKCURRANTS  
COCONUTS  
GROUNDNUTS  
JAMS  
ORANGES  
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- FUELS, Sustainers, Astronautic vehicles.** See **ASTRONAUTICS, Vehicles, Sustainers, Fuels**
- FUELS, Swimming pool nuclear reactors.** See **NUCLEAR REACTORS, Swimming pool, Fuels**
- FUELS, Utilisation**  
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- FUELS, Water cooled reactors.** See **NUCLEAR REACTORS, Water cooled, Fuels**
- FULBOURN**  
See  
HOSPITALS, Fulbourn
- FULHAM**  
See  
HOSPITALS, Fulham  
LIBRARIES, Public, Fulham  
ROADS, Fulham  
TOWN PLANNING, Fulham  
WATSON HOUSE RESEARCH CENTRE
- FULL-FASHIONED KNITWEAR.** See **KNITWEAR, Full-fashioned**
- FULL MOULD CASTING.** See **CASTING, Cavityless**
- FULTON, R.**  
Robert Fulton: man of vision. I. McNeil. *Chartered Mechanical Engr.*, 11 (Jan 64) p.16+. il. refs.
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- FUMES; Ajax oxygen process, Steel production.** See **STEEL, Production, Oxygen process, Ajax, Fumes**
- FUMES, Aluminium production.** See **ALUMINIUM, Production, Fumes**
- FUMES, Arc furnaces, Steel production.** See **STEEL, Production, Furnaces, Arc, Fumes**
- FUMES, Cavityless casting.** See **CASTING, Cavityless, Fumes**
- FUMES, Disposal, Kjeldahl method, Protein determination, Food.** See **FOOD, Determination of protein, Kjeldahl method, Fume disposal**
- FUMES, Foundry practice, Steel.** See **STEEL, Foundry practice, Fumes**
- FUMES, Nitric acid.** See **NITRIC ACID, Fumes**
- FUMES, Oxygen process, Steel production.** See **STEEL, Production, Oxygen process, Fumes**
- FUMES, Swarf dryers, Turning, Aluminium alloys.** See **ALUMINIUM, Alloys, Turning, Swarf, Dryers, Fumes**
- FUMES, Wrought brass manufactures.** See **BRASS, Wrought, Manufactures, Fumes**
- FUMIGATION, Bagged flour.** See **FLOUR, Bagged, Fumigation**
- FUMIGATION, Insect pests.** See **INSECTS, Pests, Fumigation**
- FUMIGATION, Storage, Cocoa beans.** See **COCOA, Beans, Storage, Fumigation**
- FUNCTION GENERATORS, Simulation, Vibrations, Mass-Spring systems.** See **MASS-SPRING SYSTEMS, Vibrations, Simulation, Function generators**
- FUNCTION GENERATORS, Transistor**  
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- FUNCTION GENERATORS, Varistors, Silicon carbide**  
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- FUNCTION SYNTHESISERS, Waveforms, Testing, Electrical servomechanisms.** See **SERVOMECHANISMS, Electrical, Testing, Waveform function synthesisers**
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- FUNDAMENTAL PARTICLES.** See **PARTICLES, Fundamental**
- FUNGI, Pests, Buildings.** See **BUILDINGS, Fungi infested**
- FUNGI, Spoilage, Bakery products.** See **BAKERY PRODUCTS, Spoilage, Fungi**
- FUNGICIDAL PAINT.** See **PAINT, Fungicidal**
- FUNGICIDES**  
Related Headings:  
 $\alpha,\beta$ -KETONES, Unsaturated, Fungicides  
FUNGICIDES, Effect on wine production. See **WINES, Production, Effect of fungicides**  
FUNGICIDES, Potatoes. See **POTATOES, Fungicides**
- FUR, Drying, Heating, Gas-fired**  
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- FURANE, Resins, Binders, Cores, Moulds.** See **MOULDS, Cores, Binders, Furane resin**
- FURANE, Resins, Binders, Moulds.** See **MOULDS, Binders, Furane resins**
- FURFURAL, Determination, Gasoil.** See **GAS OIL, Determination of furfural**
- FURFURAL, Ternary solvent extraction.** See **SOLVENT EXTRACTION, Ternary, Furfural**
- FURFURALDEHYDE.** See **FURFURAL**
- FURNACES**  
Related Headings:  
CUPOLAS  
MICROFURNACES

## FURNACES—SUBHEADINGS—Synopsis

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

## Research

## Technical activities

## Removal

## Parts and ancillaries

## Refractories

## Kinds of furnace

## Rotary

## Coal-fired

## Coke-fired

## Pulverised coal fired

## Gas fired

## Oil fired

## Electric

## Arc

## Plasma arc

## Blast

## Open hearth

## Applications

## Boilers

FURNACES, Annealing, Steel. See STEEL, Annealing, Furnaces

## FURNACES, Arc, Control systems, Programming

Programming automatic control of arc furnaces. Steel Times, 189 (13 Nov 64) p.696-7. *il.* refs.

FURNACES, Arc, Melting, Stainless steel. See STEEL, Stainless, Melting, Furnaces

FURNACES, Arc, Oxygen process, Steel production. .See STEEL, Production, Oxygen process, Furnaces, Arc

FURNACES, Arc, Sponge iron, Steel production. See STEEL, Production, Sponge iron, Furnaces, Arc

FURNACES, Arc, Stainless steel production. See STEEL, Stainless, Production, Furnaces, Arc

FURNACES, Arc, Steel production. See STEEL, Production, Furnaces, Arc

FURNACES, Arc, Vacuum melting. See MELTING, Vacuum, Furnaces, Arc

FURNACES, Arc, Vacuum re-melting, Steel. See STEEL, Re-melting, Vacuum, Furnaces, Arc

FURNACES, Arc, Voltage fluctuations. See VOLTAGE, Fluctuations, Arc furnaces

FURNACES, Beryllium—Copper production. See BERYLLIUM—COPPER, Production, Furnaces

## FURNACES, Blast

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Improvement in equipment in the blast-furnace department of the Kuznetsk Works. I. I. Vikhrev. Steel Times, 189 (9 Oct 64) p.530-2. *il.*

## FURNACES, Blast, Blowing-in

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## FURNACES, Blast, Charging, Bells

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## FURNACES, Blast, Coal—Fuel oil slurry, Injection

Coal-oil slurry injection technique proved on UK blast furnace. Steel Times, 189 (18/25 Dec 64) p.868-9. *il.*  
Iron in the fire. Esso Magazine, 13 (Winter 1963-64) p.8-10. *il.*

## FURNACES, Blast, Coke, Physical properties

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## FURNACES, Blast, Control, Gas pressure measurement

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## FURNACES, Blast, Control systems

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## FURNACES, Blast, Fuels, Solid

American research into solid fuels in blast furnaces. Steel Times, 188 (1 May 64) p.584-5

## FURNACES, Blast, Gas flow

Blast-furnace operation: gas flow and distribution of materials. A. B. Shur. Steel Times, 188 (19 Jun 64) p.832-5. *il.*

Control of flow of gas and materials in the blast furnace: summary of "Errors in the control of gas flow and distribution of materials in the blast furnace". V. F. Pashinskii. Steel Times, 188 (8 May 64) p.620-1

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FURNACES, Blast, Lead production. See LEAD, Production, Blast furnaces

## FURNACES, Blast, Oil-fired

Injection of fuel oil in blast furnaces at Klement Gottwald Works, Vitkovice. Steel Times, 189 (24 Jul 64) p.138-41. *il.*

FURNACES, Blast, Platinum production. See PLATINUM, Production, Furnaces, Blast

## FURNACES, Blast, Refractories

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## FURNACES, Blast, Refractories, Maintenance

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FURNACES, Blast, Slags, Cement. See CEMENT, Blast furnace slag

## FURNACES, Blast, Slags, Devitrification

High-temperature studies on blastfurnace slags, pt.1. J. E. Krüger, K. H. L. Sehlke & J. H. P. van Aardt. Cement & Lime Manufacture, 37 (Jul 64) p.63-70. *il.*

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## FURNACES, Blast, Slags, Phase equilibria

High temperature phase equilibria for the partial system  $3\text{CaO} \cdot \text{MgO} \cdot 2\text{SiO}_2 - \text{MgO} \cdot \text{Al}_2\text{O}_3 - 2\text{CaO} \cdot \text{Al}_2\text{O}_3 \cdot \text{SiO}_2$  in the quaternary system  $\text{CaO} - \text{SiO}_2 - \text{Al}_2\text{O}_3 - \text{MgO}$ . W. Gutt. Iron & Steel Inst. J., 202 (Sep 64) p.770-4. *il.* refs.



**FURNACES, Blast, Slags, Roads.** See **ROADS, Blast furnace slags**

### **FURNACES, Blast, Slags, Silica, Reduction**

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Silica reduction reaction in the blast furnace (abstracts) D. A. R. Kaye & J. Taylor. *Iron & Steel*, 36 (18 Dec 63) p.644-5

### **FURNACES, Blast, Stoves**

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### **FURNACES, Blast, Stoves, Checkers**

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### **FURNACES, Blast, Stoves, Regeneration theory**

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### **FURNACES, Blast, Tuyeres, Blast distribution, Control, Flowmeters—Pivoted disc valves**

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### **FURNACES, Blast, Tuyeres, Stocks, Bellows**

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### **FURNACES (Boilers) Cyclone**

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### **FURNACES (Boilers) Cyclone, Coal, Slagging**

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**FURNACES, Carburising.** See **CARBURISING, Furnaces**

### **FURNACES, Coal fired, Sodium salts deposits, Propane-air flames**

Some aspects of behaviour of sodium salts in flames. J. Dunderdale & R. A. Durie. *J. of Inst. of Fuel*, 37 (Nov 64) p.493-500. il. refs.

**FURNACES, Coal-fired boilers.** See **BOILERS, Coal fired, Furnaces**

### **FURNACES, Coke-fired, Heat loss, Flue gases, Nomograms**

Sensible heat loss on coke firing. D. S. Davis. *Gas World*, 159 (30 May 64) p.696

**FURNACES, Copper production.** See **COPPER, Production, Furnaces**

**FURNACES, Electric, Annealing, Pearlitic malleable iron.** See **IRON, Malleable, Pearlitic, Annealing, Furnaces, Electric**

**FURNACES, Electric, Glass bottle manufactures.** See **BOTTLES, Glass, Manufactures, Furnaces, Electric**

**FURNACES, Electric, Heat treatment.** See **HEAT, Treatment, Furnaces, Electric**

**FURNACES, Electric, Melting.** See **MELTING, Furnaces, Electric**

**FURNACES, Electric, Melting, Cast iron.** See **IRON, Cast, Melting, Furnaces, Electric**

**FURNACES, Electric, Melting, Glass.** See **GLASS, Melting, Furnaces, Electric**

### **FURNACES, Electric, Refractories**

Refractories for electric furnaces (summary) F. H. Aldred, N. W. Hinchliffe & E. D. Morris. *Metal Treatment*, 31 (Mar 64) p.115+

**FURNACES, Electric, Stoving, Enamelling, Cast iron.** See **IRON, Cast, Enamelling, Stoving, Furnaces, Electric**

**FURNACES, Electric, Stoving, Enamelling, Steel, Sheets.** See **SHEETS, Steel, Enamelling, Stoving, Furnaces, Electric**

**FURNACES, Electric, Vitreous enamelling.** See **ENAMELLING, Vitreous, Furnaces, Electric**

**FURNACES, Electron beam melting.** See **ELECTRON BEAM MELTING, Furnaces**

**FURNACES, Fuel—Oxygen—Scrap process, Steel production.** See **STEEL, Production, Fuel—Oxygen—Scrap process, Furnaces**

**FURNACES, Gas-fired, Annealing, Metals, Tubes.** See **TUBES, Metal, Annealing, Furnaces, Gas-fired**

**FURNACES, Gas-fired, Annealing, Steel strips.** See **STRIPS, Steel, Annealing, Furnaces, Gas-fired**

**FURNACES, Gas fired, Heat treatment.** See **HEAT, Treatment, Furnaces, Gas-fired**

**FURNACES, Gas fired, Heat treatment, Lorry parts.** See **LORRIES, Parts, Heat treatment, Furnaces, Gas fired**

**FURNACES, Gas-fired, Pressure die casting.** See **DIE CASTING, Pressure, Furnaces, Gas-fired**

### **FURNACES, Gas-fired, Radiant tubes**

Fuel economy in radiant tube furnaces. *Metallurgia*, 69 (May 64) p.213-15. il.

### **FURNACES, Gas-fired, Scotland**

Gas heated equipment in Scotland (contd.) *Metallurgia*, 69 (Jan 64) p.25-31. il.

**FURNACES, Glass lining, Steel tanks.** See **TANKS, Steel, Lining, Glass, Furnaces**

**FURNACES, Heat treatment.** See **HEAT, Treatment, Furnaces**

**FURNACES, Heat treatment, Steel tubes, Missiles.** See **MISSILES, Tubes, Steel, Heat treatment, Furnaces**

- FURNACES, Heating, Billets.** See **BILLETS, Heating, Furnaces**
- FURNACES, Induction, Melting.** See **MELTING, Furnaces, Induction**
- FURNACES, Induction, Melting, Die casting.** See **DIE CASTING, Melting, Furnaces, Induction**
- FURNACES, Induction, Melting, Steel.** See **STEEL, Melting, Furnaces, Induction**
- FURNACES, Induction, Vacuum melting, Steel.** See **STEEL, Melting, Vacuum, Furnaces, Induction**
- FURNACES, LD, Steel production.** See **STEEL, Production, Oxygen process, LD, Furnaces**
- FURNACES, Melting.** See **MELTING, Furnaces**
- FURNACES, Melting, Die casting.** See **DIE CASTING, Melting, Furnaces**
- FURNACES, Melting, Glass.** See **GLASS, Melting, Furnaces**
- FURNACES, Melting, Pressure die casting.** See **DIE CASTING, Pressure, Melting, Furnaces**
- FURNACES, Melting, Refractory metals.** See **METALS, Refractory, Melting, Furnaces**
- FURNACES, Oil-fired, Melting, Die casting.** See **DIE CASTING, Melting, Furnaces, Oil-fired**
- FURNACES, Oil-fired, Toroidal**  
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- FURNACES, Open-hearth**  
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Experimental study of the rate of metal mixing in an open-hearth furnace. J. Szekely. *J. of Iron & Steel Inst.*, 202 (Jun 64) p.505-8. il. refs.  
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What we don't know about the open-hearth furnace. J. H. Chesters. *Steel Times*, 188 (3 Apr 64) p.440-2. refs.
- FURNACES, Open hearth, Dust extraction**  
Divided slag chamber with movable dust collector. F. Bartu. *Steel Times*, 189 (14 Aug 64) p.255-6. il. refs.
- FURNACES, Open hearth, Ladles**  
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- FURNACES, Open hearth, Oil-fired, Control systems, Temperature, Measurement, Thermocouples**  
Double thermocouple measures furnace excess air: Russian control system [Serov Metallurgical Combine] O. Tedder. *Measurement & Control*, 3 (Oct 64) p.399-400. il.
- FURNACES, Open-hearth, Roofs, Refractories, Basic**  
Basic roof experience on hot-metal fixed furnaces at Ijmuiden. E. Voet. *Steel Times*, 188 (29 Apr 64) p.536-9. il.
- FURNACES, Open hearth, Roofs, Refractories, Magnesium oxide**  
Basic roofs on tilting open-hearth furnaces: experiences at Lackenby works. C. Over. *Steel Times*, 189 (10 Jul 64) p.65-7. il.
- FURNACES, Open hearth, Roofs, Refractories, Water-cooled**  
Water cooling—is this the answer to the basic roof problem? R. N. Elderfield & G. M. Workman. *Refractories J.* (Jul 64) p.270+. il. refs.
- FURNACES, Open hearth, Sulphur pickup**  
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- FURNACES, Oxygen process, Steel production.** See **STEEL, Production, Oxygen process, Furnaces**
- FURNACES, Plasma arc**  
Melting ablative materials. *Engineering*, 198 (30 Oct 64) p.566. il.  
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- FURNACES, Refractories, Repairs, Spraying, Guns**  
Slurry guns and their use in refractory repairs. D. F. McVittie. *Refractories J.* (Mar 64) p.96-8. il.
- FURNACES, Removal, Trailers**  
Special trailer for furnace box and hot anode transportation at Fort William. *Metallurgia*, 69 (Mar 64) p.114. il.
- FURNACES, Research**  
Birlec's research and development department at Erdington, Birmingham. *Foundry Trade J.*, 117 (10 Dec 64) p.766-7. il.  
Developments at AEI-Birlec's Erdington laboratories. *Brit. Steelmaker*, 30 (Sep 64) p.329-30. il.  
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- FURNACES, Reverberatory, Melting, Aluminium.** See **ALUMINIUM, Melting, Furnaces, Reverberatory**
- FURNACES, Reverberatory, Smelting, Copper.** See **COPPER, Smelting, Furnaces, Reverberatory**
- FURNACES, Rotary, Temperature, Measurement, Thermocouples**  
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- FURNACES, Steel production.** See **STEEL, Production, Furnaces**
- FURNACES, Tandem, Oxygen process, Steel production.** See **STEEL, Production, Oxygen process, Furnaces, Tandem**
- FURNACES, Vacuum, Iron production.** See **IRON, Production, Furnaces, Vacuum**
- FURNACES, Vacuum, Melting.** See **MELTING, Vacuum, Furnaces**
- FURNACES, Vacuum brazing.** See **BRAZING, Vacuum, Furnaces**
- FURNISHINGS**  
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CURTAINS  
UPHOLSTERY
- FURNISHINGS, Fabrics, Design**  
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- FURNITURE**  
Related Headings:  
CHAIRS  
TABLES
- FURNITURE, Built in, Prefabricated buildings.** See **BUILDINGS, Prefabricated, Furniture, Built in**
- FURNITURE, Design**  
Ernest Race. G. Naylor. *Design* (Apr 64) p.54-5. il.  
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**GAS (Town)**

## Related Headings:

COKE, Ovens, Gas  
GAS-HOLDERS  
PRODUCER GAS  
SYNTHESIS GAS  
WATER GAS

**GAS (TOWN)—SUBHEADINGS—Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

## Particular localities

Great Britain  
Scotland  
Wales  
Northern Ireland  
Europe  
Netherlands

## Organisations

International organisations  
Education  
Research

## Properties

Combustion  
Odour

## Technical activities

Testing  
Calorimetry  
Production  
Purification  
Drying  
Storage  
Distribution  
Pipes  
Pipelines  
Compressors  
Meters

## Constituents

Deodorants  
Equipment  
Appliances  
Burners

## Consumption

**GAS (Town) Appliances**

Assessing the performance of meters and appliances (summary) E. Johnson. *Gas J.*, 319 (23 Sep 64) p.345-8

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**GAS (Town) Appliances, Installation**

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Gasfitting on wheels (summary) J. K. Mitchell. *Gas J.*, 319 (26 Aug 64) p.224+. il.

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Black Rock Brighton. *Gas World*, 160 (1 Aug 64) p.128-9. il.

Brighton District offices and divisional gas appliance stores. *Gas Times*, 98 (Aug 64) p.12-13. il.

Old site—new ideas: innovations at Brighton's new H.Q. *Gas J.*, 319 (5 Aug 64) p.149-51. il.

South Eastern Board opens new appliance spares store. *Gas J.*, 318 (13 May 64) p.164+. il.

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How high speed gas is helping high speed storage. *Gas (Gas Publications)* 27 (May 64) p.8-10. il.

**GAS (Town) Appliances, Testing**

Testing gas appliances for approval. Gas (Gas Publications Ltd.) 27 (Aug 64) p.2-3

**GAS (Town) Biscuit kilns, Earthenware.** See EARTHENWARE, Kilns, Biscuit, Gas-fired

**GAS (Town) Boilers, Conversion to oil-fired boilers.** See BOILERS, Oil-fired, Conversion from gas-firing

**GAS (Town) Boilers, Heating, Houses.** See HOUSES, Heating, Boilers, Gas-fired

**GAS (Town) Burners, Air blast, Multi-port**

Multiport air blast burner design and application. G. W. Robertshaw. Instn. of Gas Engrs. J., 4 (May 64) p.299-328. il. refs.

Recent work on multi-point air blast burners (summary)

G. W. Robertshaw. Gas (Gas Publications) 27 (Mar 64) p.13-14

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Some developments in gas calorimetry (summary) P. Stipp. Gas J., 319 (12 Aug 64) p.175-7. il.

**GAS (Town) Catering equipment.** See CATERING, Equipment, Gas-fired

**GAS (Town) Combustion, Flue loss, Nomograms**

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**GAS (Town) Compressors, Alternators, Diesel engines**

Automatic control and protection of diesel plant

(summary) G. E. Cobb. Gas J., 318 (15 Apr 64) p.60-2

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**GAS (Town) Compressors, Boilers, Coal tar fired**

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**GAS (Town) Compressors, Turbo-boosters**

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A. B. Densham, P. A. A. Beale & R. Palmer. J. of Applied Chemistry, 13 (Dec 63) p.576-80. refs.

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**GAS (Town) Deodorants, Tetrahydrothiophene**

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**GAS (Town) Distribution, Control systems, Computers**

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**GAS (Town) Distribution, Education**

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**GAS (Town) Distribution, Organisation, Transport, Commercial vehicles**

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**GAS (Town) Distribution, Scotland**

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**GAS (Town) Distribution, West Midlands**

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**GAS (Town) Distribution, Winter**

Experiences in gas engineering during last winter (summary) A. E. Haffner & A. D. L. Copp. Gas Times, 97 (Dec 63) p.17-19

Experiences in gas engineering during the winter of 1962-63. Instn. of Gas Engrs. J., 4 (Feb 64) p.73-99. il.

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**GAS (Town) Drying, Refrigerators**

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**GAS (Town) Education**

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**GAS (Town) Equipment, Exhibition buildings.** See EXHIBITION BUILDINGS, Gas equipment

**GAS (Town) Equipment, Manufactures**

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**GAS (Town) Equipment, Steel production.** See STEEL, Production, Town gas equipment



**GAS (Town) Equipment, Storage**

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S. Vernon. *Gas J.*, 320 (4 Nov 64) p.160-7. il.

**GAS (Town) Europe**

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*GAS (Town) Furnaces.* See FURNACES, Gas-fired

*GAS (Town) Furnaces, Annealing, Metals, Tubes.* See

TUBES, Metal, Annealing, Furnaces, Gas-fired

*GAS (Town) Furnaces, Annealing, Steel.* See STEEL, Annealing, Furnaces, Gas-fired

*GAS (Town) Furnaces, Annealing, Steel strips.* See STRIPS, Steel, Annealing, Furnaces, Gas-fired

*GAS (Town) Furnaces, Carburising.* See CARBURISING, Furnaces, Gas-fired

*GAS (Town) Furnaces, Heat treatment.* See HEAT, Treatment, Furnaces, Gas-fired

*GAS (Town) Furnaces, Heat treatment, Lorry parts.* See LORRIES, Parts, Heat treatment, Furnaces, Gas fired

*GAS (Town) Furnaces, Pressure die casting.* See DIE CASTING, Pressure, Furnaces, Gas-fired

*GAS (Town) Heating, Electric cable manufactures.* See CABLES, Electric, Manufactures, Heating, Gas-fired

*GAS (Town) Heating, Flats.* See FLATS, Heating, Gas

*GAS (Town) Heating, Baking, Cake.* See CAKE, Baking, Heating, Gas-fired

*GAS (Town) Heating, Buildings.* See BUILDINGS, Heating, Gas

*GAS (Town) Heating, Can manufactures, Food.* See FOOD, Cans, Manufactures, Heating, Gas-fired

*GAS (Town) Heating, Chains manufactures.* See CHAINS, Manufactures, Heating, Gas-fired

*GAS (Town) Heating, Commercial buildings.* See COMMERCIAL BUILDINGS, Heating, Gas-fired

*GAS (Town) Heating, Cremators.* See CREMATORS, Heating, Gas

*GAS (Town) Heating, Die cast zinc alloy, Model manufactures, Toys.* See TOYS, Scale models, Zinc alloys, Die cast, Manufactures, Heating, Gas-fired

*GAS (Town) Heating, Drying, Candlewick bedspreads.* See BEDSPREADS, Candlewick, Drying, Heating, Gas-fired

*GAS (Town) Heating, Drying, Cigarette manufactures.* See CIGARETTES, Manufactures, Drying, Heating, Gas

*GAS (Town) Heating, Drying, Coatings, Roof racks, Motor cars.* See MOTOR CARS, Racks (Roof) Coatings, Drying, Heating, Gas-fired

*GAS (Town) Heating, Drying, Fur.* See FUR, Drying, Heating, Gas-fired

*GAS (Town) Heating, Flats.* See FLATS, Heating, Gas

*GAS (Town) Heating, Fluorescent pigments manufactures.* See PIGMENTS, Fluorescent, Manufactures, Heating, Gas-fired

*GAS (Town) Heating, Glassware manufactures.* See GLASSWARE, Manufactures, Heating, Gas-fired

*GAS (Town) Heating, Houses.* See HOUSES, Heating, Gas

*GAS (Town) Heating, Paint manufacture.* See PAINT, Manufacture, Heating, Gas-fired

*GAS (Town) Heating, Prefabricated housing.* See HOUSING, Prefabrication, Heating, Gas

*GAS (Town) Heating, Public buildings.* See PUBLIC BUILDINGS, Heating, Gas-fired

*GAS (Town) Heating, Radiator manufactures, Motor cars.* See MOTOR CARS, Radiators, Manufactures, Heating, Gas-fired

*GAS (Town) Heating, Rollers.* See ROLLERS, Heating, Gas

*GAS (Town) Heating, Rolling, Aluminium sheets.* See SHEETS, Aluminium, Rolling, Heating, Gas-fired

*GAS (Town) Heating, Smoking, Bacon.* See BACON, Smoking, Heating, Gas fired

*GAS (Town) Heating, Spit roasting, Meat.* See MEAT, Spit roasting, Heating, Gas

*GAS (Town) Heating, Spraying, Nickel alloys, Protection, Moulds, Glass bottles manufactures.* See BOTTLES, Glass, Manufactures, Moulds, Protection, Nickel alloys, Spraying, Heating, Gas-fired

*GAS (Town) Heating, Steel production.* See STEEL, Production, Heating, Gas-fired

*GAS (Town) Heating, Stoving, Paint, Bodies, Motor cars.* See MOTOR CARS, Bodies, Paint Stoving, Heating, Gas-fired

*GAS (Town) Heating, Stoving, Paint, Electrical engineering components.* See ELECTRICAL ENGINEERING, Components, Paint, Stoving, Heating, Gas-fired

*GAS (Town) Heating, Stoving, Paint, Fittings, Lighting.* See LIGHTING, Fittings, Paint, Stoving, Gas-fired

*GAS (Town) Heating, Telephone coin box manufactures.* See TELEPHONY, Coin boxes, Manufactures, Heating, Gas-fired

*GAS (Town) Heating, Textiles manufactures.* See TEXTILES, Manufactures, Heating, Gas

*GAS (Town) Heating, Type founding.* See TYPE FOUNDING, Heating, Gas-fired

*GAS (Town) Heating, Vegetable oil processing.* See OILS, Vegetable, Processing, Heating, Gas-fired

*GAS (Town) Heating, Warehouses, Storage, Town gas appliances.* See GAS (Town) Appliances, Storage, Warehouses, Heating, Gas-fired

*GAS (Town) Heating, Water, Housing.* See HOUSING, Water, Heating, Gas-fired

*GAS (Town) Heating, Water, Scalding, Pigs.* See PIGS, Scalding, Water, Heating, Gas-fired

*GAS (Town) Heating, Water, Shower baths.* See SHOWERS, Baths, Water, Heating, Gas

*GAS (Town) Heating, Web dryers, Rotary machines, Printing.* See PRINTING, Machines, Rotary, Web dryers, Gas-fired

*GAS (Town) Immersion heating, Liquids.* See LIQUIDS, Heating, Immersion, Gas-fired

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Simplified peak trapping technique for gas chromatography. F. L. Snelson. *Chemistry & Industry* (4 Apr 64) p.575-6. il. refs.

GAS CHROMATOGRAPHY, Separation, Organic chemicals. See ORGANIC CHEMICALS, Separation, Gas chromatography

GAS CHROMATOGRAPHY, Solvent determination, Paint. See PAINT, Determination of solvents, Gas chromatography

GAS CHROMATOGRAPHY, Steam volatile compound determination, Hops. See HOPS, Determination of steam volatile compounds, Gas chromatography

**GAS CHROMATOGRAPHY, Valves, Control systems**

Flexible automatic valve for use on process gas chromatographs. R. Gittins. *Trans. of Soc. of Instrument Technology*, 16 (Sep 64) suppl. p.xviii-xxii. il.

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GAS COOLED NUCLEAR REACTORS. See NUCLEAR REACTORS, Gas cooled

GAS DENSITY BALANCES, Detectors, Gas chromatography, Gases determination, Metals. See METALS, Determination of gases, Gas chromatography, Detectors, Gas density balances

**GAS DISCHARGE**

Related Headings:

PLASMAS

TOWNSEND DISCHARGE

GAS DISCHARGE, Air. See AIR, Gas discharge

GAS DISCHARGE, Ammonia-Helium. See AMMONIA-HELIUM, Gas discharge

**GAS DISCHARGE, Cathodes, Oxide coated, Evaporation, Rate**

Evaporation rate of the oxide coated cathode. G. Lakatos & J. Bit6. *Brit. J. of Applied Physics*, 15 (Feb 64) p.189-91. il. refs.

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GAS DISCHARGE, Reactions, Hydrocarbons. See HYDROCARBONS, Reactions, Gas discharge

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**GAS-FIRED FURNACES, Heating, Billets.** See **BILLETS, Heating, Furnaces, Gas-fired**

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**GAS-LIFT PUMPS, Sludge.** See **SLUDGE, Pumps, Gas-lift**

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**GAS-LIQUID CHROMATOGRAPHY, Coal tar.** See **COAL**

**TAR, Gas-liquid chromatography**

**GAS-LIQUID CHROMATOGRAPHY, Combustion products, iso-Pentane.** See **iso-PENTANE, Combustion, Products, Gas-liquid chromatography**

**GAS-LIQUID CHROMATOGRAPHY,  $\beta$ -Cyanoethyl alcohols.** See  **$\beta$ -CYANOETHYL ALCOHOLS, Gas-liquid chromatography**

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**GAS-LIQUID CHROMATOGRAPHY, Phenols, Cigarette smoke.** See **CIGARETTES, Smoke, Phenols, Gas-liquid chromatography**

**GAS-LIQUID CHROMATOGRAPHY, Plasticiser determination, Lacquers.** See **LACQUERS, Determination of plasticisers, Gas-liquid chromatography**

**GAS-LIQUID CHROMATOGRAPHY, Residue determination, Triazines, Herbicides.** See **HERBICIDES, Triazines, Residues, Determination, Gas-liquid chromatography**

**GAS-LIQUID CHROMATOGRAPHY, Residues, Chlorinated pesticides.** See **PESTICIDES, Chlorinated, Residues, Determination, Gas-liquid chromatography**

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**GAS-LIQUID-SOLID, Fluidised beds.** See **FLUIDISED BEDS, Gas-liquid-solid**

**GAS-LIQUID SYSTEMS**

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BUBBLES

DROPLETS

DROPS

FOAM

**GAS-LIQUID SYSTEMS, Flow**

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**GAS OIL, Spraying, Mechanical handling, Wet coal, Power stations.** See POWER STATIONS, Coal, Wet, Mechanical handling, Spraying, Gas oil

**GAS OIL, Straight run, Hydrodesulphurisation, Catalysts, Pellets, Effect of pore structure**

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**GAS PLATING, Motor car parts.** See MOTOR CARS, Parts, Gas plating

**GAS PLATING, Plastics.** See PLASTICS, Gas plating

**GAS PRESSURE BONDING, Compaction, Powders.** See POWDERS, Compaction, Gas pressure bonding

**GAS RECYCLE CHEMICAL REACTORS.** See CHEMICAL REACTORS (Gas recycle)

**GAS SHIELDED ARC WELDING.** See WELDING, Arc, Gas shielded

**GAS SHIELDED ARC WELDING, Aluminium-Bronze.** See ALUMINIUM-BRONZE, Welding, Arc, Gas shielded

**GAS SHIELDED ARC WELDING, Austenitic steel, Steam plant, Power stations.** See POWER STATIONS, Steam plant, Steel, Austenitic, Welding, Arc, Gas shielded

**GAS SHIELDED ARC WELDING, Combustion chambers, Missiles.** See MISSILES, Combustion chambers, Welding, Arc, Gas shielded

**GAS SHIELDED ARC WELDING, High-tensile steel, Sheets.** See SHEETS, Steel, High-tensile, Welding, Arc, Gas shielded

**GAS SHIELDED ARC WELDING, Metal sheets.** See SHEETS, Metals, Welding, Arc, Gas shielded

**GAS SHIELDED ARC WELDING, Mild steel.** See STEEL, Mild, Welding, Arc, Gas shielded

**GAS SHIELDED ARC WELDING, Stainless steel, Plates.** See PLATES, Steel, Stainless, Welding, Arc, Gas shielded

**GAS SHIELDED ARC WELDING, Steel alloys.** See STEEL, Alloys, Welding, Arc, Gas shielded

**GAS-SOLID CHROMATOGRAPHY, Silica gel adsorption studies, Butane.** See BUTANE, Adsorption (Silica gel) Studies, Gas-solid chromatography

**GAS-SOLID FLUIDISED BEDS.** See FLUIDISED BEDS, Gas-Solid

**GAS STORAGE, Fruit.** See FRUIT, Storage, Gas

**GAS STORAGE, Peas.** See PEAS, Storage, Gas

**GAS TURBINE LOCOMOTIVES.** See LOCOMOTIVES, Gas turbine

**GAS TURBINES**

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**GAS TURBINES**

Related Headings:

LIFT ENGINES  
TURBOFANS  
TURBOJETS  
TURBOPROPS  
TURBOROCKETS  
TURBOSHAFTS

**GAS TURBINES—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

Problems  
*Noise*

Processes  
*Heat, Recovery*

Feed materials  
*Fuel oil  
Lubricants*

Components  
*Nozzles*

Types  
*Brown coal fired*

Applications  
*Pumps  
Vehicles  
Aircraft  
Hovercraft  
Motor vehicles  
Motor cars  
Electric power generation  
Alternators  
Nuclear power stations*

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Related Headings:

TURBOJETS

**GAS TURBINES (Aircraft) Blades, Casting, Investment**

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**GAS TURBINES (Aircraft) Nozzles, Plates, Steel, Stainless, Bonding**

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**GAS TURBINES, Catapults, Taking-off. See TAKING-OFF, Catapults, Gas turbine****GAS TURBINES, Cement production. See CEMENT, Production, Gas turbines****GAS TURBINES, Components, Casting, Investment**

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**GAS TURBINES, Hydrofoil motor boats. See BOATS, Motor, Hydrofoil, Gas turbines****GAS TURBINES, Lubricants, Flame resistant**

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**GASEOUS OXIDATION, Hydrocarbons. See HYDRO-CARBONS, Oxidation, Gaseous****GASES****Related Headings:**

BOYLE'S LAW  
FUMES  
VAPOUR

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METALS, Liquid, Evaporation, Gas streams, Cold

**GASES, Combustion, Liquid propellants. See PROPELLANTS, Liquid, Combustion, Gases****GASES (Combustion) Trimethyl phosphate additives, Hydrogen—Oxygen flames. See FLAMES, Hydrogen—Oxygen, Additives, Trimethyl phosphate, Combustion gases****GASES, Compressed, Cylinders, Handling**

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See

PARLIAMENTARY BUILDINGS, Geneva

## GENOA

See

RAILWAYS, Narrow gauge, Genoa  
TRAMWAYS, Genoa  
TRAMWAYS, Rack, Genoa

## GENOA-SESTRI

See

SHIPYARDS, Genoa-Sestri

## GEOCHEMICAL PROSPECTING. See PROSPECTING,

Geochemical

## GEODESY, Artificial satellites. See SATELLITES, Artificial,

Geodesy

## GEOLOGY, Civil engineering. See CIVIL ENGINEERING,

Geology

## GEOLOGY, Clay. See CLAY, Geology

## GEOLOGY, Dam sites. See DAMS, Sites, Geology

## GEOLOGY, Gravel. See GRAVEL, Geology

## GEOLOGY, Limestone. See LIMESTONE, Geology

## GEOLOGY, Quarrying. See QUARRYING, Geology

## GEOLOGY, Reservoir sites. See RESERVOIRS, Sites, Geology

## GEOLOGY, Sand. See SAND, Geology

## GEOLOGY, Sandstone. See SANDSTONE, Geology

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physical

## GEOPHYSICS

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ATMOSPHERE

## GEORGIAN HOUSES. See HOUSES, Georgian

## GEOTECHNICS. See EARTHWORK

## GEOTHERMAL POWER STATIONS. See POWER STATIONS,

Geothermal

## GEOTHERMAL STEAM-WATER. See STEAM-WATER, Geo-

thermal

## GERANIUM OIL, Turkish. See PALMAROSA OIL

## GERMANIUM, Alloys, Zone melting, Thin alloy, Motion, D.C. induced

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## GERMANIUM, Photoelectric cells, Radiation pyrometers. See

PYROMETERS, Radiation, Photoelectric cells, Germanium

## GERMANIUM, Semiconductors. See SEMICONDUCTORS,

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## GERMANIUM, Thermal expansion

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AMPLIFIERS, Audio frequency, Transistor, Germanium

## GERMANIUM-IRON. See IRON-GERMANIUM

## GERMANIUM-SILICON, Semiconductors. See SEMICONDUCTORS,

TORS, Germanium-Silicon

## GERMANY

See

AIRCRAFT, Manufactures, West Germany

BERLIN. University

BOCHUM. University

BRIDGES, West Germany

CAMERAS, Manufactures, Germany

CAR PARKING, West Germany

CHEMICAL TECHNOLOGY, East Germany

CHURCHES, Eller

COAL, Mining, Machines, West Germany

COAL, Mining, Ruhr

COAL, Mining, West Germany

ELECTRICAL ENGINEERING, West Germany

FARBWERKE HOECHST A.G., Laboratories, Frankfurt-am-Main

FLATS, Prefabrication, East Germany

FOOTWEAR, Manufactures, West Germany

FOUNDRY PRACTICE, West Germany

HOUSING, West Berlin

INDUSTRIAL DESIGN, Exhibitions, Germany

INSTITUTE FOR CINEMATIC CELL RESEARCH, Frankfurt am Main

KNITTING, Industry, East Germany

LOCOMOTIVES, Diesel-hydraulic, East Germany

MACHINE TOOLS, Manufactures, East Germany

MACHINERY, Standardisation, East Germany

MOTOR CARS, Manufactures, West Germany

MUSEUMS, West Berlin

PAPER, Coating, Germany

PAPER, Industry, West Germany

PETROCHEMICALS, Production, West Germany

PETROLEUM, Distribution, Winter, West Germany

PHOTOGRAPHY, Equipment, Manufactures, West Germany

PLASTICS, Reinforced, Manufactures, Germany

PORCELAIN, Meissen

PORTS, East Germany

PRINTING, East Germany

PRINTING, Germany

RAILCARS, East Germany

RAILWAYS, West Germany

ROADS, Town planning, Heidelberg

ROADS, Town planning, Munich

RUBBER, Manufactures, West Germany

SHIPBUILDING, East Germany

SHIPBUILDING, Germany

SHIPPING, Industry, East Germany

TECHNICAL EDUCATION, West Germany

TORFINSITUT, Hanöver

TORFFORSCHUNG G.m.b.H., Bad Zwischenahn

TOWN HALLS, Marl

TOWN PLANNING, Berlin

TOWN PLANNING, Kassel

TRAINS, Electric, West Germany

TRAMCARS, East Germany

TRAMWAYS, Krefeld-Moers

TRAMWAYS, Leipzig

VIADUCTS, West Germany

## GHANA

See

PORTS, Ghana

GIBBERELLIC ACID, Effect on warm water steeping, Malt production. See MALT, Production, Steeping, Warm water, Effect of gibberellic acid

GIBBERELLINS, Determination, Indian corn. See INDIAN CORN, Determination of gibberellins

GIBBERELLINS, Determination, Runner beans. See RUNNER BEANS, Determination of gibberellins

GILBERN G.T. MOTOR CARS. See MOTOR CARS, Types, Gilbern G.T.

GILERA 123 CC MOTOR CYCLES. See MOTOR CYCLES, Types, Gilera 123 cc  
 GILERA JUBILEE MOTOR CYCLES. See MOTOR CYCLES, Types, Gilera Jubilee  
 GILL BOXES, Drawing, Worsted yarns. See YARNS, Worsted, Drawing, Gill boxes

GILMAN, J. J. *ed.*

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GIN, Bottling, Mechanical handling equipment

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Superstructure reconstruction at a bridge carrying sewers. Surveyor, 124 (25 Jul 64) p.32-32A. il.

GIRDERS (Bridges) Steel, Manufactures

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GIRDERS, Curved, Strength

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Elevated, Girders, Steel, Prestressed

GIRDERS, Warren. See TRUSSES, Warren

GLAMORGAN

See

VILLAGE PLANNING, Reynoldston

GLANDLESS PUMPS, Feedwater, Boilers. See BOILERS,

Feedwater, Pumps, Glandless

GLAS 1700 CARS. See MOTOR CARS, Types, Glas 1700

GLASGOW

See

AIRPORTS, Terminal buildings, Abbotsinch

ARCHITECTURE, Glasgow

CHURCHES, Glasgow

FLATS, Glasgow, Pollockshaws

HOUSING, Glasgow

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STRATHCLYDE. UNIVERSITY

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University of Glasgow: new biochemistry building. J. N. Davidson. Nature, 201 (8 Feb 64) p.559-60. il.

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GLASS

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GLASS

Related Headings:

ENAMELS

GLAZES

SILICA, Fused

GLASS-SUBHEADINGS-Synopsis

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

Research

Properties

Structure

Strength

Fracture

Hardness

Chemical resistance

Technical activities

Manufacture

Melting

Crystallisation

Machining

Bonding

Engraving

Stippling

Storage

Kinds of glass

Yellow

By material

Borate

Alkali borate

Borosilicate

Strontium borate

Aluminium borophosphate

Calcium aluminoborate

Aluminosilicate

Sodium aluminosilicate

Calcium aluminosilicate

Silica

Silicate

Soda-Lime-Silica

Silica-Soda

Zinc silicate

Lead crystal

Selenide

Alkali germanate

By purpose

Safety

Optical

Applications

Building materials

Packaging materials

GLASS, Alkali borate, Vanadium co-ordination, Studies,

Magnetic susceptibility

Magnetic and spectrophotometric studies on glasses containing vanadium. S. Kumar. Physics & Chemistry of Glasses, 5 (Aug 64) p.107-10. il. refs.

GLASS, Alkali borate, Vanadium co-ordination, Studies,

Spectrophotometry

Magnetic and spectrophotometric studies on glasses containing vanadium. S. Kumar. Physics & Chemistry of Glasses, 5 (Aug 64) p.107-10. il. refs.



- GLASS, Alkali germanate, Spectroscopy, Infra-red**  
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- GLASS, Aluminium borophosphate, Vanadium co-ordination, Studies, Magnetic susceptibility**  
Magnetic and spectrophotometric studies on glasses containing vanadium. S. Kumar. *Physics & Chemistry of Glasses*, 5 (Aug 64) p.107-10. il. refs.
- GLASS, Aluminium borophosphate, Vanadium co-ordination, Studies, Spectrophotometry**  
Magnetic and spectrophotometric studies on glasses containing vanadium. S. Kumar. *Physics & Chemistry of Glasses*, 5 (Aug 64) p.107-10. il. refs.
- GLASS, Aluminosilicate, Acid resistance, Determination, Alkalis, Extraction, Measurements, Flame photometry**  
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- GLASS, Aluminosilicate, Structure**  
Aluminium in glasses and in melts. E. D. Lacy. *Physics & Chemistry of Glasses*, 4 (Dec 63) p.234-8. il. refs.
- GLASS, Balustrades.** See **BALUSTRADES, Glass**
- GLASS, Baria-alumina-silica, Glass-ceramics production.** See **GLASS-CERAMICS, Production, Glass, Baria-alumina-silica**
- GLASS, Bonding, Optical contact**  
On the production and use of the optical contact bond. R. N. Smartt & J. V. Ramsay. *J. of Scientific Instruments*, 41 (Aug 64) p.514. refs.
- GLASS, Borosilicate, Acid resistance, Determination, Alkalis, Extraction, Measurements, Flame photometry**  
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- GLASS, Borosilicate, Manufactures**  
Borosilicate glass production [James Jobbing Ltd., Sunderland] *Engineer*, 218 (4 Sep 64) p.366-7. il.
- GLASS, Borosilicate, Seals.** See **SEALS, Glass, Borosilicate**
- GLASS, Borosilicate, Sodium diffusion, Studies, Radioisotopes**  
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- GLASS, Bottles.** See **BOTTLES, Glass**
- GLASS, Bottles, Beer.** See **BEER, Bottles, Glass**
- GLASS, Bottles, Soft drinks.** See **DRINKS, Soft, Bottles, Glass**
- GLASS, Building materials**  
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Expanding sphere of glass. W. Salter. *Building Materials, Components*, 24 (May 64) p.15+. il.  
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- GLASS, Calcium aluminoborate, Conductivity, Effect of oxygen diffusion**  
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- GLASS, Calcium aluminosilicate, Conductivity, Effect of oxygen diffusion**  
Electrical conduction and oxygen diffusion in calcium aluminoborate and aluminosilicate glasses. W. C. Hagel & J. D. Mackenzie. *Physics & Chemistry of Glasses*, 5 (Aug 64) p.113-19. il. refs.
- GLASS, Chemical resistance**  
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- GLASS, Conductive, Tubes, Electric heating.** See **HEATING, Electric, Tubes, Glass, Conductive**
- GLASS, Containers.** See **CONTAINERS, Glass**
- GLASS, Containers, Storage, Fission products, Wastes, Nuclear reactors.** See **NUCLEAR REACTORS, Wastes, Fission products, Storage, Containers, Glass**
- GLASS, Cross-arms, Concrete poles, Overhead power Transmission lines.** See **POWER TRANSMISSION LINES, Overhead, Poles, Concrete, Cross-arms, Glass**
- GLASS, Crystallisation, Nucleation, Silver, Diffusion**  
Study of a diffusion process in glass by subsequent devitrification. V. Gottardi & B. Locardi. *Physics & Chemistry of Glasses*, 5 (Oct 64) p.137. refs.
- GLASS, Curtain walls, Office buildings.** See **OFFICE BUILDINGS, Walls, Curtain, Glass**
- GLASS, Decorative, Panels, Buildings.** See **BUILDINGS, Panels, Decorative, Glass**
- GLASS, Desorption, Inert gases, Ion pumps.** See **ION PUMPS, Gases, Inert, Desorption, Glass**
- GLASS, Domes, Assembly halls, University buildings.** See **UNIVERSITY BUILDINGS, Assembly halls, Domes, Glass**
- GLASS, Electric lamps.** See **LAMPS, Electric, Glass**
- GLASS, Electrodes.** See **ELECTRODES, Glass**
- GLASS, Engraving, Netherlands**  
Glass decorators of Holland. E. C. Veldhuizen. *Industrial Diamond Rev.*, 24 (Jul 64) p.164-7. il.
- GLASS, Façades, Banks.** See **BANKS, Façades, Glass**
- GLASS, Foil.** See **FOIL, Glass**
- GLASS, Fracture**  
Fracture of glass. B. A. Proctor. *Applied Materials Research*, 3 (Jan 64) p.28-34. il. refs.
- GLASS, Glazings, Bodies, Motor cars.** See **MOTOR CARS, Bodies, Glazings, Glass**
- GLASS, Hardness, Correlation with surface tension**  
Factors for the calculation of the surface tension of glasses at 1200°C. C. Rubenstein. *Glass Technology*, 5 (Feb 64) p.36-40. il. refs.
- GLASS, Housings, Piezoelectric units, Crystal oscillators.** See **OSCILLATORS, Crystal, Piezoelectric units, Housings, Glass**
- GLASS, Lasers.** See **LASERS, Glass**
- GLASS, Lead crystal, Manufactures**  
English lead crystal: the story of the Webb-Corbett works at Stourbridge Worcestershire. *Ceramics*, 15 (Jan 64) p.12-15. il.
- GLASS, Lenses.** See **LENSES, Glass**
- GLASS, Lining, Steel tanks.** See **TANKS, Steel, Lining, Glass**
- GLASS, Lithia-alumina-titania-silica, Glass-ceramics production.** See **GLASS-CERAMICS, Production, Glass, Lithia-alumina-titania-silica**
- GLASS, Machining, Diamond**  
French glass company overcomes production problems. G. Finnigan. *Industrial Diamond Rev.*, 24 (Mar 64) p.69-71. il.
- GLASS, Machining, Ultrasonics**  
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Ultrasonic machining of glass (summary) K. J. Habell & R. N. Wilson. *Mass Production*, 40 (Apr 64) p.55-61. il.  
Ultrasonic machining of glass at the N.P.L. *Machinery*, 104 (20 May 64) p.1172-6. il.
- GLASS, Manufactures**  
Frederick Carder—designer, technologist, and centenarian. H. J. Haden. *Glass Technology*, 5 (Jun 64) p.105-9. il.  
Materials handling system at Rockware Glass Ltd. *Glass Age*, 7 (Feb 64) p.34-6. il.  
1,750,000 articles produced each week [James A. Jobling & Co., Ltd.] T. M. R. Green. *Mass Production*, 40 (Oct 64) p.29-37. il.

**GLASS, Manufactures, Batch filling**

Batch-filling methods for large glass tanks. G. W. T. Bird. *Glass Technology*, 5 (Feb 64) p.4-8

**GLASS, Manufactures, Batch handling**

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Installation of modern batch plant in existing works. A. Garstang. *Glass Technology*, 5 (Feb 64) p.21-4. il.

**GLASS, Manufactures, Batch handling, Control systems**

Automatic materials handling at a glass factory. Machinery Lloyd (European ed.) 36 (4 Apr 64) p.17-19. il.

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New materials handling system at glass factory [Rockware Glass, Ltd.] *Mechanical Handling*, 51 (Jan 64) p.35-8. il.

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Rockware Glass Ltd.: new materials handling system. *Glass*, 41 (Jan 64) p.13-18. il.

**GLASS, Manufactures, Batch handling, Pneumatic equipment**

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**GLASS, Manufactures, Batch mixing, Control systems**

Automatic materials handling at a glass factory. Machinery Lloyd (Overseas ed.) 36 (28 Mar 64) p.25-7. il.

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**GLASS, Manufactures, Education**

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**GLASS, Manufactures, Education, Universities**

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**GLASS, Manufactures, Electrical equipment**

Modernising the electrical distribution system in a glass factory. C. B. Taylor. *Machinery Lloyd (Overseas ed.)* 36 (15 Feb 64) p.38-41. il.

**GLASS, Manufactures, Float process**

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Pilkington Brothers Limited float glass production. *Glass*, 41 (Jan 64) p.21-3. il.

**GLASS, Manufactures, Japan**

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**GLASS, Manufactures, Power substations**

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**GLASS, Manufactures, Sand**

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**GLASS, Manufactures, Soda ash**

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**GLASS, Manufactures, Soda ash, Homogeneity, Effect of particle size**

Characteristics of the soda ash and their effect on the homogeneity of the batch, pt.1. L. Malarme. *Glass*, 41 (Nov 64) p.345-8. il. refs.

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**GLASS, Melting, Furnaces**

Operating experience with unit melters. C. A. Lightfoot & G. H. Thompson. *Glass Technology*, 5 (Oct 64) p.189-94. il. refs.

**GLASS, Melting, Furnaces, Boosters, Electric**

Some practical aspects of electric boosting. M. Fort. *Glass Technology*, 5 (Oct 64) p.199-201

**GLASS, Melting, Furnaces, Electric, Heat transfer**

Thermal study of an all-electric container-glass furnace.

R. G. Newton. *Glass Technology*, 5 (Apr 64) p.64-6. il.

**GLASS, Melting, Furnaces, Forehearth, Heating, Electric, Elements, Silicon carbide**

Crusilite conversions for feeder forehearth. C. Thomas. *Glass*, 40 (Dec 63) p.565+. il.

**GLASS, Melting, Furnaces, Fuel**

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**GLASS, Melting, Furnaces, Waste heat recovery, Recuperator tubes, Fracture**

Causes of breakdown of ceramic recuperators of chamotte and high alumina materials, pt.1. E. S. Wiesbaden. *Glass*, 41 (Aug 64) p.381-4. il. refs.

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**GLASS, Melting, Tanks, Heat transfer**

Heat transfer between flame and melt in a glass-melting furnace. W. Trier. *Glass*, 41 (May 64) p.229+. il. refs.

**GLASS, Melting, Tanks, Refractories**

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**GLASS, Melting, Tanks, Refractories, Corundum, Corrosion, Flux line**

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**GLASS, Melting, Tanks, Refractories, Galvanic corrosion**

Apparatus for the study of the galvanic corrosion of refractories. C. H. Greene & J. R. Little. *Glass Technology*, 4 (Dec 63) p.170-2. il. refs.

**GLASS, Melting, Tanks, Refractories, Zircon**

Behaviour of zircon tiles in a glass tank hearth. R. R. Lister. *Glass Technology*, 5 (Jun 64) p.124-31. il. refs.

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GLASS, Mössbauer absorption, Iron-57. See IRON-57, Mössbauer absorption, Glass

**GLASS, Optical**

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**GLASS, Packaging materials**

Packaging in glass (contd.) *Canning & Packing*, 34 (Mar 64) p.14-15. il.

GLASS, Pipes. See PIPES, Glass

GLASS, Pressure reactors. See PRESSURE REACTORS, Glass

GLASS, Pressure shells, Submarine structures. See SUBMARINE STRUCTURES, External pressure shells, Glass

GLASS, Reaction with tricresyl phosphate. See TRICRESYL PHOSPHATE, Reaction with glass

**GLASS, Research, Computers**

Computer as a research tool. T. K. Harrison. *Glass Technology*, 5 (Oct 64) p.181-5. il.

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**GLASS (Safety)**

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## GRAIN

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**HALLS OF RESIDENCE, Prefabricated**

Construction of students' hostels. Concrete & Constructional Engng., 59 (Apr 64) p.153-6. il.

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**HALLS OF RESIDENCE, Study-bedrooms, Furniture, Built-in**

Undergraduates' unit furniture: St. Catherine's College, Oxford. Architects' J., 140 (4 Nov 64) p.1057-8. il.

**HALOGENATED SOLVENTS, Corrosion, Refrigeration equipment, Purification, Argon. See ARGON, Purification, Refrigeration, Equipment, Corrosion, Solvents, Halogenated****HALOGENS, Ions, Effect on inhibitors, Sulphuric acid corrosion, Copper. See COPPER, Corrosion (Sulphuric acid) Inhibitors, Effect of halogen ions**

**HALOGENS**, Ions, Effect on inhibitors, Sulphuric acid corrosion, Iron. See **IRON**, Corrosion (Sulphuric acid) Inhibitors, Effect of halogen ions

**HALOGENS**, Oxidation, Aqueous solutions, Organic chemicals. See **ORGANIC CHEMICALS**, Solutions, Aqueous, Oxidation, Halogens

# **HALOTHANE**

Discovery of the anaesthetic halothane—an example of industrial research. J. Ferguson. *Chemistry & Industry* (16 May 64) p.818-24. refs.

**HAMBURGER FLUGZEUGBAU HFB320 HANSA AIRCRAFT**. See **AIRCRAFT** (Light) Types, Hamburger Flugzeugbau HFB 320 Hansa

# **HAMILTON**

See

COUNTY OFFICES, Lanarkshire

**HAMMER GRINDERS**, Animal feedingstuffs manufactures. See **ANIMAL FEEDINGSTUFFS**, Manufactures, Grinders,

Impact

# **HAMMERS**

Related Headings:

IMPACT CYLINDERS

**HAMMERS**, Drop forging. See **FORGING**, Drop, Hammers

# **HAMMERS, Impact tests**

Impact apparatus. W. J. Frost. *Bull. of Mechanical Engng. Education*, 3 (Jul/Sep 64) p.231-2. il.

# **HAMMERSMITH**

See

FLATS, Old people, Hammersmith

FLYOVERS, Hammersmith

# **HAMMOND, R.**

"Earth moving and excavating plant": reviewed. *Public Cleansing*, 54 (Sep 64) p.1153-4

# **HAMPSHIRE**

See

ESTUARIES, Pollution, Hampshire

ROADS, Hampshire

# **HAMPSTEAD**

See

FLATS, Hampstead

LIBRARIES, Public, Hampstead

# **HAND TOOLS, Electric**

Portable electric tools: a review of up-to-date equipment.

Light Production Engng., 2 (Nov 64) p.4-8. il.

Total insulation makes portable-tool earthing obsolete.

Metalworking Production, 108 (1 Jan 64) p.53-5. il.

# **HAND TOOLS, Electric, Die castings, Machining, Distortion, Clamping**

Avoiding work distortion in jigs and fixtures. *Machine Shop*, 25 (Aug 64) p.368-74. il.

# **HAND TOOLS, Electric, Insulation, Double**

Double-insulation for safety [Wolf Electric Tools]

Electrical Rev., 174 (27 Mar 64) p.480-2. il.

# **HAND TOOLS, Electric, Routing, Wood. See WOOD,**

Routing, Hand tools, Electric

# **HAND WEAVING**, Woollen carpets. See **CARPETS**, Woollen,

Weaving, Hand

# **HANDBRAKES**, Commercial vehicles. See **VEHICLES**,

Commercial, Brakes, Hand

# **HANDBRAKES**, Motor cars. See **MOTOR CARS**, Brakes, Hand

# **HANDBRAKES**, Motor vehicles. See **MOTOR VEHICLES**,

Brakes, Hand

# **HANDICAPPED CHILDREN**, Schools. See **SCHOOLS**,

Handicapped children

**HANDICAPPED PEOPLE**, Telephony equipment. See **TELEPHONY**, Equipment, Handicapped people

# **HANDKERCHIEFS, Paper, Manufactures, Machines**

Range of tissue & cellulose wadding converting machinery.

Packaging, 35 (Feb 64) p.62-3. il.

# **HANDLEY PAGE, Sir Frederick**

H.P.—the man and his work (abstracts). G. V. Lachmann. *Engineer*, 217 (26 Jun 64) p.1138-9. il.

Sir Frederick Handley Page—the man and his work. G. V. Lachmann. *J. of R. Aeronautical Soc.*, 68 (Jul 64) p.433-52. il.

# **HANDLEY PAGE DART HERALD AIRCRAFT. See** **AIRCRAFT**, Types, Handley Page, Dart Herald

# **HANDRAILS, Staircases**

Continuous handrailing on staircases: from eyesore to ornament. F. Keeling. *Builder*, 207 (18 Sep 64) p.616-17. il.

Handrail: factory and office building, 72 Pireos Street, Moskhato, Athens. *Architects' J.*, 139 (10 Jun 64) p.1301-2. il.

# **HANDS—COMMER CBEW 1294 ARTICULATED VEHICLES.**

See **MOTOR VEHICLES**, Articulated, Types, Commer CBEW 1294—Hands

**HANKS**, Man-made fibres, Carpets. See **CARPETS**, Man-made fibres, Hanks

# **HANKS, Wool, Dyeing**

Effect of wool quality and packing on flow and level dyeing in hank-dyeing machines. A. N. Derbyshire & D. R.

Lemin. *J. of Soc. of Dyers & Colourists*, 80 (Jul 64) p.363-9. il. refs.

# **HANOVER**

See

TORFINSTITUT, Hanover

**HANSA AIRCRAFT**. See **AIRCRAFT** (Light) Types, Hamburger Flugzeugbau HFB 320 Hansa

**HARBOURS**. See **PORTS**

# **HARD FIBRES**

Significant trends in processing and manufacturing hard fibres. S. A. G. Caldwell. *Textile Manufacturer*, 90 (Oct 64) p.394-7. il.

**HARDCORES**, Concrete floors. See **FLOORS**, Concrete, Hardcores

**HARDENABILITY**, Metals. See **METALS**, Hardenability

**HARDENABILITY**, Steel. See **STEEL**, Hardenability

# **HARDENING**

Related Headings:

AGEING

**HARDENING**, Cement. See **CEMENT**, Hardening

**HARDENING**, Flame. See **FLAME HARDENING**

**HARDENING**, Low alloy steel. See **STEEL**, Low alloy, Hardening

**HARDENING**, Metals. See **METALS**, Hardening

**HARDENING**, Mild steel. See **STEEL**, Mild, Hardening

**HARDENING**, Platinum, Laminates. See **LAMINATES**, Platinum, Hardening

**HARDENING**, Precipitation, Effect on mechanical properties, Mild steel. See **STEEL**, Mild, Mechanical properties, Effect of precipitation hardening

**HARDENING**, Precipitation, Stainless steel. See **STEEL**, Stainless, Hardening, Precipitation

**HARDENING**, Strain, Copper. See **COPPER**, Strain hardening

**HARDENING**, Strain, Face centered cubic metals. See **METALS**, Face centered cubic, Strain hardening

**HARDENING**, Strain, Iron. See **IRON**, Strain hardening

**HARDENING**, Strain, Single crystals, Alpha brass. See **BRASS**, Alpha, Crystals, Single, Strain hardening

**HARDENING**, Strain, Single crystals, Copper. See **COPPER**, Crystals, Single, Strain hardening

**HARDFACING**, Chromium—Nickel. See **CHROMIUM—**

**NICKEL**, Hardfacing

**HARDFACING**, Steel. See **STEEL**, Hardfacing

**HARDFACING**, Tungsten carbide. See **TUNGSTEN CARBIDE**, Hardfacing

**HARDFACING**, Valve components. See **VALVES**, Components, Hardfacing



**HARDNESS**

Causes of hardness and hardness changes. W. Epprecht. Engrs'. Digest, 25 (Aug 64) p.73-7. il.

**HARDNESS**

Related Headings:

INDENTATION

MICROINDENTATION

**HARDNESS**, Cast chromium-iron. See IRON-CHROMIUM, Cast, Hardness

**HARDNESS**, Changes, Temperature measurement, Internal combustion engine components. See ENGINES (Internal combustion) Components, Temperature, Measurement, Hardness changes

**HARDNESS**, Glass. See GLASS, Hardness

**HARDNESS**, Green sand moulds, Casting, Grey iron. See IRON, Grey, Casting, Moulds, Sand, Green, Hardness

**HARDNESS**, Hot, Aluminium alloys. See ALUMINIUM, Alloys, Hardness, Hot

**HARDNESS**, Hot, Castings, Iron. See IRON, Castings, Hardness, Hot

**HARDNESS**, Hot, Lead. See LEAD, Hardness, Hot

**HARDNESS**, Metals. See METALS, Hardness

**HARDNESS**, Moulds. See MOULDS, Hardness

**HARDNESS, Tests**

Brush up on indentation hardness testing. E. H. Enberg. Metalworking Production, 108 (2 Dec 64) p.58-64. il.  
Measuring "hardness". B. W. Mott. New Scientist, 22 (9 Apr 64) p.103-5. il.

**HARDNESS, Tests, Instruments**

New British-built hardness testers. Machinery, 105 (16 Dec 64) p.1443-5. il.

**HARDNESS**, Vickers, Carburised cutters, Machine tools. See MACHINE TOOLS, Cutters, Carburised, Hardness, Vickers

**HARDWOODS**, Bearings. See BEARINGS, Hardwood

**HARDWOODS**, Saddles, Moulding, Wood. See WOOD, Moulding, Saddles, Hardwood

**HARLOW**

See

CIVIC CENTRES, Harlow

SANITATION, Municipal, Harlow

STANDARD TELECOMMUNICATION LABORATORIES LTD., Harlow

**HARMONIC DISTORTION**, Amplifiers. See AMPLIFIERS, Distortion, Harmonic

**HARMONIC DISTORTION**, Transistor oscillators. See

OSCILLATORS, Transistor, Distortion, Harmonic

**HARMONIC GENERATORS**. See FREQUENCY, Multipliers

**HARMONICS**, Controlled rectifier circuits output. See

RECTIFIERS, Controlled, Circuits, Output, Harmonics

**HARMONICS**, Neutral current, Power distribution. See POWER DISTRIBUTION, Current, Neutral, Harmonics

**HARMONICS**, Polyphase a.c. machines. See A.C., Machines, Polyphase, Harmonics

**HARNESSES**, Looms. See LOOMS, Harnesses

**HARPS, Testing**

Dynamic testing of harps. Engng. Materials & Design, 7 (Nov 64) p.783+. il.

**HARROW**

See

CIVIC CENTRES, Harrow

HOSPITALS, Harrow, Northwick Park

**HARTHILL**

See

ROADS, Harthill

**HARTLEY OSCILLATORS**, Oscilloscopes. See OSCILLOSCOPES, Oscillators, Hartley

**HARTNETT**, J. P., & IRVINE, T. F. See IRVINE, T. F., & HARTNETT, J. P.

**HARVARD UNIVERSITY, Carpenter Center for the Visual Arts**

Carpenter centre, Harvard. Architect & Building News, 225 (1 Jan 64) p.13-16. il.

**HARVESTERS**, Combine. See COMBINE HARVESTERS

**HARVESTERS, Flail**

Flail forage harvesters. G. E. Tooby & T. D. Dewes. Agriculture, 71 (Apr 64) p.183-5. il.

**HARVESTERS**, Potatoes. See POTATOES, Harvesters

**HARVESTERS**, Sugar beet. See SUGAR BEET, Harvesters

**HARVESTING**, Sugar beet. See SUGAR BEET, Harvesting

**HARWELL**

See

ATOMIC ENERGY RESEARCH ESTABLISHMENT, Harwell

**HASSI MESSOUAD**

See

PETROLEUM, Production, Hassi Messouad

**HASTINGS**

See

GOVERNMENT BUILDINGS, Hastings

**HATS, Acrylic fibres**

Dralon-effect fibre for hats. Man-Made Textiles, 41 (Apr 64) p.50+. il.

**HATS, Felt, Wool, Dyes**

Application of milling acid and metal-complex dyes to hatting felt. J. Park. J. of Soc. of Dyers & Colourists, 80 (Nov 64) p.588-94. il. refs.

**HATCHES (Ships) Covers, Grillages, Analysis**

Elastic analysis of a hatch cover grill. C. T. F. Ross. Shipbuilder, 71 (Apr 64) p.158-60. il. refs.

**HAULAGE**, Road. See ROADS, Haulage

**HAVANA**

See

CATHEDRALS, Havana

**HAWAII**

See

AIR TRANSPORT, Hawaii

**HAWKER HUNTER FGA.9 MILITARY AIRCRAFT**. See

AIRCRAFT, Military, Types, Hawker Hunter FGA.9

**HAWKER SIDDELEY 748 AIRCRAFT**. See AIRCRAFT, Types, Hawker Siddeley 748

**HAWKER SIDDELEY 748 MF MILITARY AIRCRAFT**. See

AIRCRAFT, Military, Transport, Types, Hawker Siddeley

**HAWKER SIDDELEY ARGOSY AIRCRAFT**. See AIRCRAFT, Types, Hawker Siddeley Argosy

**HAWKER SIDDELEY COMET 4 AIRCRAFT**. See AIRCRAFT, Types, Hawker Siddeley Comet 4 748 MF

**HAWKER SIDDELEY DH 125 LIGHT AIRCRAFT**. See

AIRCRAFT (Light) Types, Hawker Siddeley DH 125

**HAWKER SIDDELEY P.1127, Fighter aircraft**. See FIGHTER AIRCRAFT, Vertical take off, Types, Hawker Siddeley P. 1127

**HAWKER SIDDELEY TRIDENT AIRCRAFT**. See AIRCRAFT,

Types, Hawker Siddeley Trident

**HAWKER SIDDELEY TRIDENT IC AIRCRAFT**. See AIRCRAFT, Types, Hawker Siddeley Trident IC

**HAWKER SIDDELEY TRIDENT IE AIRCRAFT**. See AIRCRAFT, Types, Hawker Siddeley Trident IE

**HAY, Determination of lignin**

Comparison of six methods of estimating lignin in grass hay. D. L. Whitehead & G. V. Quicke. J. of Science of Food & Agriculture, 15 (Jun 64) p.417-22. refs.

**HAYDOCK**

See

SHOPPING CENTRES, Haydock

**HAYESFORD PARK**

See

SHOPPING CENTRES, Hayesford Park

**HAZE**, Chill, Beer. See BEER, Haze, Chill

**HEAD-UP DISPLAY UNITS**, Instruments, Aircraft. See

AIRCRAFT, Instruments, Display units, Head-up

**HEAD-UP DISPLAY UNITS**, Instruments, Military aircraft.

See AIRCRAFT, Military, Instruments, Display units, Head-up

**HEADBOARDS (Commercial vehicles) Loads**

Body design to prevent cab-crushing. S. F. Page. *Commercial Vehicles*, 38 (Mar 64) p.64+. il.

**HEADING**, Cold. See **COLD HEADING**

**HEADLIGHTS, Motor cars**

Sidelamps or dipped headlamps? R. C. Chaumuffin. *Auto-car*, 120 (24 Jan 64) p.169-70. il.

**HEADLIGHTS (Motor cars) Dipped**

Dipsomania or common sense? R. Cook. *Motor*, 125 (26 Feb 64) p.34-7. il.

**HEADPHONES, Aircraft**

Headsets and headset testing. *World Aviation Electronics & Controls*, 4 (Feb 64) p.75-8

**HEALTH**, Air conditioning. See **AIR CONDITIONING**, Health aspects

**HEALTH**, Industrial. See **INDUSTRIAL HEALTH**

**HEALTH**, Industrial, Fast neutrons. See **NEUTRONS**, Fast, Industrial health

**HEALTH**, Industrial, Radioactivity. See **RADIOACTIVITY**, Industrial health

**HEALTH**, Industrial, Radiography. See **RADIOGRAPHY**, Industrial health

**HEALTH**, Industrial, Steel production. See **STEEL**, Production, Industrial health

**HEALTH**, Industrial, Welding. See **WELDING**, Industrial health

**HEALTH CENTRES**, Industrial buildings. See **INDUSTRIAL BUILDINGS**, Health centres

**HEARING, Studies, Pulses, Audio frequency, Modulators, Transistor**

Wide-range audio-frequency pulse modulator. M. E. Bryan & W. Tempest. *Electronic Engng.*, 36 (Mar 64) p.154-8. il. ref.

**HEARING AIDS, Solid state circuits**

Coming of micromin to aid the deaf. *Engineering*, 198 (4 Dec 64) p.723-4. il.

**HEARING AIDS, Transistor**

Transistor hearing aid for bone-conduction receivers. D. F. Rigby & D. C. Jones. *P.O. Electrical Engrs.' J.*, 57 (Jul 64) p.86-8. il.

**HEART, Prostheses**

Towards artificial heart. M. E. de Baakey & C. W. Hall. *New Scientist*, 22 (28 May 64) p.538-41. il.

**HEART**, Prostheses, Education, Mechanical engineering. See **MECHANICAL ENGINEERING**, Education, Heart prostheses

**HEART, Stimulators, Oscillators, Blocking, Transistor**

Adopting a factory for medical engineering. *Mass Production*, 40 (May 64) p.49-52. il.

Internal cardiac pacemaker. *Engineering*, 197 (1 May 64) p.598-9. il.

**HEARTHS**, Blast furnaces. See **FURNACES**, Blast, Hearths

**HEAT**

Related Headings:

TEMPERATURE

THERMAL

THERMOELECTRICITY

**HEAT-SUBHEADINGS-Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

Loss

Tolerance

Transfer

Exchangers

Radiation

Conduction

Storage

Pumps

Applications

Treatment

**HEAT**, Collectors, Solar energy. See **SOLAR ENERGY**, Heat collectors

**HEAT**, Conduction

Related Headings:

THERMAL CONDUCTIVITY

**HEAT**, Conduction, Analogues, Networks, Electrical

Liebmann network analogue for heat transfer laboratory work. J. C. Dent. *Bull. of Mechanical Engng. Education*, 3 (Oct/Dec 64) p.295-303. il. refs.

**HEAT**, Conduction, Boundary conditions, Analogues, Networks, Resistance-capacitance

Simulation of boundary conditions in heat conduction problems in a resistance-capacitance electrical analogue. K. S. Chan & K. R. Rushton. *J. of Scientific Instruments*, 41 (Sep 64) p.535-40. il. refs.

**HEAT**, Conduction, Equation, Numerical solution

Numerical method for unsteady one-dimensional conduction. Y. R. Mayhew. *Bull. of Mechanical Engng. Education*, 3 (Jan/Mar 64) p.63-74. il. refs.

**HEAT**, Conduction, Solids. See **SOLIDS**, Heat, Conduction

**HEAT**, Evolution, Sliding bearings. See **BEARINGS**, Sliding, Heating

**HEAT**, Exchangers

Modern trends in heat exchanger design and maintenance. G. G. Page. *Plant Engr.*, 9 (Jul/Aug 64) p.90-109. il. refs.

Optimization of heat exchanger. J. W. Fisher. *Brit. Chemical Engng.*, 9 (Jul 64) p.450-6. il. refs.

**HEAT**, Exchangers, Air-cooled, Design, Weather data

Weather data for cooling plant design. *Engineering*, 197 (31 Jan 64) p.190-1. il.

**HEAT**, Exchangers, Ammonia production. See **AMMONIA**, Production, Heat exchangers

**HEAT**, Exchangers, Design, Computers

Heat exchanger design by computer. M. M. Souchaud. *Petroleum Times*, 68 (21 Aug 64) p.428-30

**HEAT**, Exchangers, Design, Effect of weather data

Weather & the design of cooling equipment. *Heating & Air Conditioning*, 33 (Sep 64) p.187-9. il.

**HEAT**, Exchangers, Glass-ceramics, Cellular

Cellular glass ceramic—a new material for regenerative heat exchangers. W. Hryniskak. *Oil Engine & Gas Turbine*, 32 (May 64) p.34-7. il. refs.

**HEAT**, Exchangers, Milk pasteurisation. See **MILK**, Pasteurisation, Heat exchangers

**HEAT**, Exchangers (Nuclear power stations) Countercurrent, Frequency response

Frequency response of linear counterflow heat exchangers. R. K. Thomasson. *J. of Mechanical Engng. Science*, 6 (Mar 64) p.13-25. il. refs.

**HEAT, Exchangers (Nuclear power stations) Countercurrent, Transfer functions, Finite differences**

Harmonic response of a simple counterflow heat-exchanger, obtained from various finite-difference representations. B. Wilson. *Control*, 8 (Jan 64) p.19-23. il. refs.

**HEAT, Exchangers (Nuclear power stations) Manufactures**

Advanced practice in heavy fabrication, pt.2 [Head Wrightson Teesdale, Ltd.] *Welding & Metal Fabrication*, 32 (May 64) p.187-90. il.

**HEAT, Exchangers, Plate type, Seals**

Improved seal assembly for plate heat exchangers: Patent specification, no.940, 755. *Heating & Air Conditioning*, 32 (Jan 64) p.33-4. il.

HEAT, Exchangers, Purse seiners, Anchovies. See ANCHOVIES, Seiners, Purse, Heat exchangers

**HEAT, Exchangers (Refrigerators) Liquid suction**

Liquid-suction heat exchangers. M. Komadera. *Modern Refrigeration*, 67 (Mar 64) p.257+. il.

**HEAT, Exchangers, Rotating tube**

Heat transfer from a rotating tube with controlled fluid flow. R. F. Pattenden. *J. of Mechanical Engng. Science*, 6 (Jun 64) p.144-9. il. refs.

**HEAT, Exchangers, Scale, Formation, Effect of supersaturation**

Effect of supersaturation and flow conditions on the initiation of scale formation. J. L. Chandler. *Trans. of Instrn. of Chemical Engrs.*, 42 (Feb 64) p.24-34. il. refs.

**HEAT, Exchangers, Scale, Formation, Effect of turbulent flow**

Effect of supersaturation and flow conditions on the initiation of scale formation. J. L. Chandler. *Trans. of Instrn. of Chemical Engrs.*, 42 (Feb 64) p.24-34. il. refs.

**HEAT, Exchangers, Scraped surface**

Effects of blade design in scraped surface heat transfer. T. R. Bott & M. R. Sheikh. *Brit. Chemical Engng.*, 9 (Apr 64) p.229-31. il. refs.

**HEAT, Exchangers, Tube plates, Structural analysis**

Quasi-theoretical method for calculating the rigidity of multi-pass tube plates. J. P. Duncan. *J. of Mechanical Engng. Science*, 6 (Jun 64) p.173-90. il. refs.

**HEAT, Exchangers, Tubes, Drawing**

Production of long tubes for heat exchangers [Accles & Pollock Ltd.] *Engineer*, 218 (10 Jul 64) p.65. il.

**HEAT, Exchangers, Tubular, Linings, Plastics**

Heat exchange design economics: plastics lining v. bare metal. G. Winters & D. P. McDonald. *Chemical Processing*, 10 (May 64) p.4-8. il.

**HEAT, Exchangers, Water cooled, Cathodic protection**

Cathodic protection of heat exchangers using once through circulating water systems. G. G. Page. *Corrosion Prevention & Control*, 11 (Feb 64) p.19-26. il. refs.

HEAT, Exhaust, Utilisation, Gas turbines, Alternators. See ALTERNATORS, Gas turbines, Exhaust heat utilisation

HEAT, Liberation, Irradiation, Pressure vessels, Nuclear reactors. See NUCLEAR REACTORS, Pressure vessels, Irradiation, Heat liberation

**HEAT, Loss**

Tracking down heat losses. G. R. Winch. *Fuel Efficiency*, 12 (Nov 64) p.26+. il.

HEAT, Loss, Boilers. See BOILERS, Heat loss

HEAT, Loss, Coke-fired furnaces. See FURNACES, Coke-fired, Heat loss

HEAT, Loss, Ducts, Air conditioning. See AIR CONDITIONING, Ducts, Heat loss

**HEAT, Measurement**

Related Headings:

✓ CALORIMETERS  
CALORIMETRY

HEAT, Processing, Meat. See MEAT, Heat, Processing

**HEAT, Pumps**

Heat pumps and thermal storage. *Modern Refrigeration*, 67 (May 64) p.526-7

Small heat pumps. M. Komadera. *Steam & Heating Engr.*, 34 (Oct 64) p.6-12. il.

**HEAT, Pumps, Agricultural machinery**

Heat pumps for farms: survey of rural applications in Europe and U.S.A. reported by U.N. Economic Commission for Europe. *Electrical Times*, 146 (17 Sep 64) p.417

HEAT, Pumps, Cooling, Photomultipliers. See PHOTOMULTIPLIERS, Cooling, Heat pumps

**HEAT, Pumps, Thermoelectric**

Maintenance of controlled temperature differences using a thermoelectric heat pump. L. Gucci & H. J. V. Tyrrell. *J. of Scientific Instruments*, 41 (Jul 64) p.468-9. il. refs.

Thermal conditioning for buildings: application of the thermoelectric heat pump. D. Probert. *Heating & Ventilating Engr.*, 37 (Jan 64) p.374-7. il. refs.

HEAT, Radiant, Singeing, Fabrics. See FABRICS, Singeing, Radiant heat

**HEAT, Radiation**

Related Headings:

EMISSIVITY  
INFRA-RED RADIATION  
RADIOMETERS

**HEAT, Radiation, Boundary conditions, Analogues, Networks, Resistance-capacitance**

Simulation of boundary conditions in heat conduction problems in a resistance-capacitance electrical analogue. K. S. Chan & K. R. Rushton. *J. of Scientific Instruments*, 41 (Sep 64) p.535-40. il. refs.

HEAT, Recovery, Air conditioning. See AIR CONDITIONING, Waste heat utilisation

HEAT, Recovery, Air conditioning, Office buildings. See OFFICE BUILDINGS, Air conditioning, Waste heat utilisation

HEAT, Recovery, Furnaces, Melting, Glass. See GLASS, Melting, Furnaces, Waste heat recovery

HEAT, Recovery, Gas turbines. See GAS TURBINES, Heat, Recovery

HEAT, Recovery, Steam plant, Steel production. See STEEL, Production, Steam plant, Waste heat recovery

HEAT, Recovery, Tankers, Ships. See TANKERS, Ships, Waste heat recovery

HEAT, Recovery, Vapours, Solvents, Ovens, Stoving, Paint. See PAINT, Stoving, Ovens, Solvents, Vapours, Waste heat recovery

HEAT, Resistance, Paint. See PAINT, Heat resistance

HEAT, Sealing, Making-up, Man-made fibre fabrics, Clothing. See CLOTHING, Fabrics, Man-made fibres, Making-up, Heat, Sealing

HEAT, Sealing, Making-up, Man-made fibres, Fabrics. See FABRICS, Man-made fibres, Making-up, Sealing, Heat

HEAT, Sealing, Making-up, Man-made fibres, Knitwear fabrics. See KNITWEAR, Fabrics, Man-made fibres, Making-up, Heat sealing

HEAT, Sealing, Making-up, Nylon fabrics, Clothing. See CLOTHING, Fabrics, Nylon, Making-up, Heat sealing

HEAT, Sealing, Packaging, Thermoplastic film. See FILM, Thermoplastics, Packaging, Sealing, Heat

HEAT, Sealing, Wax coated papers, Packaging. See PACKAGING, Papers, Wax coated, Heat sealing

HEAT, Sensitivity, Wax, Wool. See WOOL, Wax, Heat sensitivity

HEAT, Sinks, Semiconductors. See SEMICONDUCTORS, Heat sinks

HEAT, Stability, Dyed nylon fibres. See NYLON, Fibres, Dyed, Heat stability

**HEAT, Tolerance, Ergonomics**

Sensitivity to heat and cold of summer and winter preferers. A. F. M. Driver. *Ergonomics*, 7 (Oct 64) p.475-9. il. refs.



**HEAT, Transfer**

- Advances in heat transfer. J. Szekely. *Chemistry & Industry* (5 Sep 64) p.1538-40. refs.
- Heat transfer. F. J. Bayley. *Chartered Mechanical Engr.*, 11 (Sep 64) p.426-32. il. refs.
- Some developments in heat transfer. T. R. Bott. *Brit. Chemical Engng.*, 9 (Jan 64) p.32-6. refs.
- HEAT, Transfer**  
Related Headings:  
CONVECTION  
COOLING  
COOLING SYSTEMS  
THERMAL CONDUCTIVITY
- HEAT, Transfer, Annular pipes, Gas flow.** See GAS FLOW, Pipes, Annular, Heat transfer
- HEAT, Transfer, Buildings.** See BUILDINGS, Heat transfer
- HEAT, Transfer, Checkers, Stoves, Blast furnaces.** See FURNACES, Blast, Stoves, Checkers, Heat transfer
- HEAT, Transfer, Control systems**  
Discontinuously controlled thermal processes. W. K. Roots & F. Walker. *J. of Inst. of Fuel*, 37 (Sep 64) p.397-414. il. refs.
- HEAT, Transfer, Coolants, Mercury cooled nuclear reactors.** See NUCLEAR REACTORS, Mercury cooled, Coolants, Heat transfer
- HEAT, Transfer, Cylinders.** See CYLINDERS, Heat transfer
- HEAT, Transfer, Cylinders, Internal combustion engines.** See ENGINES (Internal combustion) Cylinders, Heat transfer
- HEAT, Transfer, Cylinders, Steam engines.** See STEAM, Engines, Cylinders, Heat transfer
- HEAT, Transfer, Electric furnaces, Melting, Glass.** See GLASS, Melting, Furnaces, Electric, Heat transfer
- HEAT, Transfer, Equations, Solutions, Relaxation**  
Relaxation methods for two-dimensional field problems. G. Pallett. *Bull. of Mechanical Engng. Education*, 3 (Apr/Jun 64) p.147-53. il. refs.
- HEAT, Transfer, Fuel elements, Nuclear reactors.** See NUCLEAR REACTORS, Fuel elements, Heat transfer
- HEAT, Transfer, Gas fired immersion heating, Liquids.** See LIQUIDS, Heating, Immersion, Gas-fired, Heat transfer
- HEAT, Transfer, Gas fluidised beds.** See FLUIDISED BEDS, Gas, Heat transfer
- HEAT, Transfer, Gases.** See GASES, Heat transfer
- HEAT, Transfer, Laminar flow, Non-Newtonian fluids, Horizontal pipes.** See PIPES, Horizontal, Fluids, Non-Newtonian, Laminar flow, Heat transfer
- HEAT, Transfer, Residual gases, Cryostats.** See CRYOSTATS, Residual gases, Heat transfer
- HEAT, Transfer, Roads, Coal mining.** See COAL, Mining, Roads, Heat transfer
- HEAT, Transfer, Rotating discs.** See DISCS, Rotating, Heat transfer
- HEAT, Transfer, Steel radiators.** See RADIATORS, Steel, Heat transfer
- HEAT, Transfer, Tanks, Melting, Glass.** See GLASS, Melting, Tanks, Heat transfer
- HEAT, Transfer, Teaching, Laboratories**  
Teaching heat transfer, pt.2. G. Pallett. *Technical Education*, 6 (Feb 64) p.88. il.
- Teaching heat transfer—laboratories, equipment and experiments. G. Pallett. *Technical Education*, 6 (Jan 64) p.26+. il. refs.
- HEAT, Transfer, Thermal entrance region.** See PIPES, Thermal entrance region, Heat transfer
- HEAT, Transfer, Turbulent flow, Nitrogen dioxide.** See NITROGEN DIOXIDE, Flow, Turbulent, Heat transfer
- HEAT, Transfer, Vapour film, Growth**  
Maximum and minimum bounds for the growth of a vapour film at the surface of a rapidly heated plate. T. D. Hamill & S. G. Bankoff. *Chemical Engng. Science*, 19 (Jan 64) p.59-61. refs.

- HEAT, Transfer, Vertical annular flow, Steam-water.** See STEAM-WATER, Flow, Annular, Vertical, Heat transfer
- HEAT, Transfer, Windows.** See WINDOWS, Heat transfer
- HEAT, Transient, Shear flow.** See SHEAR FLOW, Heat, Transient
- HEAT, Treatment**  
Related Headings:  
ANNEALING  
AUSTEMPERING  
HARDENING  
QUENCHING  
STRESS RELIEVING  
TEMPERING
- HEAT, Treatment, Alloy steel.** See STEEL, Alloys, Heat treatment
- HEAT, Treatment, Aluminium, Sheets.** See SHEETS, Aluminium, Heat treatment
- HEAT, Treatment, Aluminium, Strips.** See STRIPS, Aluminium, Heat treatment
- HEAT, Treatment, Aluminium-Copper.** See ALUMINIUM-COPPER, Heat treatment
- HEAT, Treatment, Castings, Aluminium alloys.** See ALUMINIUM, Alloys, Castings, Heat treatment
- HEAT, Treatment, Clinker compounds, Effect on hydration, Cement.** See CEMENT, Hydration, Effect of clinker compounds, Heat treatment
- HEAT, Treatment, Effect on magnetic properties, Iron-nickel.** See IRON-NICKEL, Magnetic properties, Effect of heat treatment
- HEAT, Treatment, Fluidised beds**  
Fluidised bed for heat treating metals. J. A. Gordon. *Production Engng.*, 43 (May 64) p.256-7. il.
- Fluidized beds: heat treatment as well? [AEI-Birlec Ltd., Birmingham] *Engineering*, 198 (7 Aug 64) p.177-8. il.
- HEAT, Treatment, Furnaces**  
Furnace research and development [AEI-Birlec] *Engineer*, 218 (17 Jul 64) p.89-90. il.
- Nemo Heat Treatments Limited. *Metal Treatment*, 31 (Nov 64) p.452-4. il.
- Recent heat treatment furnace installations. *Metallurgia*, 69 (Jun 64) p.263-82. il.
- Research into melting and heat-treatment [A.E.I.-Birlec Ltd.] *Metal Industry*, 105 (16 Jul 64) p.88-91. il.
- HEAT, Treatment, Furnaces, Control systems**  
Two examples of the economics of instrumentation. A. Barker & R. F. Wright. *Steel Times*, 189 (20 Nov 64) p.719-23. il.
- HEAT, Treatment, Furnaces, Electric**  
Electric furnaces for foundry melting and heat-treatment. *Foundry Trade J.*, 116 (13 Feb 64) p.199-203. il.
- HEAT, Treatment, Furnaces, Electric, Design**  
Advances in furnace design: the industrial designer's contribution. W. E. Court. *A.E.I. Engng.*, 4 (Sep/Oct 64) p.243-7. il.
- HEAT, Treatment, Furnaces, Gas-fired**  
Birlec pit furnace for gas carburising. *Gas (Gas Publications)* 27 (Nov 64) p.13+. il.
- Gas-fired furnace plant in Scotland. *Metal Treatment*, 31 (Mar 64) p.103-12. il.
- New pit furnace for contract treatment. *Gas World*, 160 (21 Nov 64) p.76-7. il.
- HEAT, Treatment, Furnaces, Parts, Cobalt alloys**  
Cobalt alloy for furnace plant: UMCO-50 alloy justifies its cost in severe thermal conditions. *Metal Industry*, 105 (13 Aug 64) p.206-7. il.
- HEAT, Treatment, Iron castings.** See IRON, Castings, Heat treatment
- HEAT, Treatment, Lorry parts.** See LORRIES, Parts, Heat treatment
- HEAT, Treatment, Nodular iron.** See IRON, Nodular, Heat treatment

**HEAT, Treatment, Plant**

Nemo Heat Treatments Limited: unique facilities for contract work. *Metallurgia*, 70 (Oct 64) p.182-3. il.

Specialised heat treatment service [Nemo Heat Treatments Ltd., Stockport] *Engineer*, 218 (2 Oct 64) p.547-8. il.

HEAT, Treatment, Steel. See STEEL, Heat treatment

HEAT, Treatment, Steel, Strips. See STRIPS, Steel, Annealing

HEAT, Treatment, Steel, Tools. See TOOLS, Steel, Heat

HEAT, Treatment, Steel, Tubes, Missiles. See MISSILES, Tubes, Steel, Heat treatment

HEAT, Treatment, Stressed glass fibre. See GLASS FIBRE, Stressed, Heat treatment

HEAT, Treatment, Welded austenitic steel. See STEEL, Austenitic, Welded, Heat treatment

HEAT, Treatment, Wheels, Rolling stock, Railways. See ROLLING STOCK (Railways) Wheels, Heat treatment

HEAT BALANCE, Air conditioning. See AIR CONDITIONING, Heat balance

HEAT BALANCE, Feedwater, Boilers, Ships. See SHIPS, Boilers, Feedwater, Heat balance

**HEAT CAMERAS**

How to see in the dark: electronic solutions in the problem (extracts) M. C. Boutry. *Nuclear Energy* (Dec 64) p.340-2

Industrial potential of the "heat camera". C. Maxwell Code. *New Scientist*, 23 (16 Jul 64) p.104-7. il.

HEAT CAMERAS, Infra-red radiation, Measurement, Temperature, Skin. See SKIN, Temperature, Measurement, Infra-red radiation, Heat cameras

HEAT CAMERAS, Infra-red radiation, Resistor fault detection. See RESISTORS, Faults, Detection, Infra-red radiation, Heat cameras

HEAT OF ADSORPTION. See ADSORPTION, Heat

HEAT OF HYDRATION, Cement. See CEMENT, Hydration, Heat

**HEAT OF REACTION, Determination, Calorimeters**

High temperature differential calorimeter. C. V. Thomasson & D. A. Cunningham. *J. of Scientific Instruments*, 41 (May 64) p.308-10. il. refs.

HEAT PROCESSED HERRINGS. See HERRINGS, Heat processed

HEAT RESISTANT AROMATIC PLASTICS. See PLASTICS, Aromatic, Heat resistant

HEAT RESISTANT CAST IRON. See IRON, Cast, Heat-resistant

HEAT RESISTANT CAST STEEL. See STEEL, Cast, Heat-resistant

HEAT RESISTANT CONCRETE. See CONCRETE, Heat-resistant

HEAT SENSITISED MATERIALS, Photography. See PHOTOGRAPHY, Heat sensitised materials

HEAT TREATED ALLOYS, Titanium. See TITANIUM, Alloys, Heat treated

HEAT TREATED MARTENSITIC STAINLESS STEEL. See STEEL, Stainless, Martensitic, Heat treated

HEAT TREATED STEEL. See STEEL, Heat treated

HEATERS, Feedwater, Boilers, Power stations. See POWER STATIONS, Boilers, Feedwater, Heaters

**HEATERS, Motor cars**

H and C: hot and ventilation systems on three of the latest models. G. Howard. *Autocar*, 121 (13 Nov 64) p.1014-7. il.

HEATERS (Motor cars) Electric motors, Armatures, Manufactures

Production research cuts costs and improves quality [Smiths Motor Accessories] *Metalworking Production*, 108 (9 Sep 64) p.63-5. il.

HEATERS, Water. See WATER, Heaters

**HEATING**

Related Headings:

BAKING  
CALCINING  
CRUCIBLES  
ELECTRON BEAM HEATING  
FURNACES

KILNS  
OVENS  
PLASMA ARCS  
ROASTING  
STOVES  
STOVING

**HEATING—SUBHEADINGS—Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

*Education**Equipment*

*Control systems*

By medium

*Hot water*  
*Steam*

By fuel

*Oil fired*  
*Liquefied petroleum gas-fired*  
*Electric*  
*Induction*  
*Dielectric*

HEATING, Air. See AIR HEATING

HEATING, Astronautics vehicles. See ASTRONAUTICS, Vehicles, Re-entry into atmosphere, Heating

HEATING, Billets. See BILLETS, Heating

HEATING, Bleaching, Colour centres, Silica-Soda glass. See GLASS, Silica-Soda, Colour centres, Bleaching, Heating

HEATING, Buildings. See BUILDINGS, Heating

HEATING, Buildings, Computers. See COMPUTERS, Buildings, Heating

HEATING, Buildings, Zoological gardens. See ZOOLOGICAL GARDENS, Buildings, Heating

HEATING, Buses. See BUSES, Heating

HEATING, Central, Effect on veneers, Wood, Furniture. See FURNITURE, Wood, Veneers, Effect of central heating

HEATING, Central, Effect on wood building materials. See WOOD, Building materials, Effect of central heating

HEATING, Central, Flats. See FLATS, Heating, Central

HEATING, Ceramics manufactures. See CERAMICS, Manufactures, Heating

HEATING, Churches. See CHURCHES, Heating

**HEATING, Control systems**

Electric heating controls. G. C. Gracey & W. G. Evans. *Steam & Heating Engr.*, 33 (Jun 64) p.20-3. il.

**HEATING, Control systems, Manufactures**

Satchwell story. *Steam & Heating Engr.*, 33 (Aug 64) p.23-6. il.

Thermostat manufacture: complex factors decide design of versatile room model [Satchwell Appliance Controls] *Electrical Times*, 145 (18 Jun 64) p.952-3. il.

HEATING, Crystallisation, Massecuite, Sugar. See SUGAR, Massecuite, Crystallisation, Heating

**HEATING, Dielectric, Magnetrons, Continuous wave**

Twenty-kilowatt 890 Mc/s continuous-wave magnetron.  
J. R. G. Twisleton. *Proc. of Instn. of Electrical Engrs.*,  
111 (Jan 64) p.51-6. il. refs.

**HEATING, Dielectric, Microwaves, Medical electronics**

Microwave therapy. *Design Electronics*, 2 (Nov 64) p.18-19. il.

**HEATING, District. See DISTRICT HEATING****HEATING, Drying, Cigarette manufactures. See CIGARETTES, Manufactures, Drying, Heating****HEATING, Drying, Grain. See GRAIN, Drying, Heating****HEATING, Drying, Inks, Printing. See PRINTING, Inks, Drying, Heating****HEATING, Education**

History of education and training in the heating & ventilating industry since the war. *Instn. of Heating & Ventilating Engrs.*, 32 (Sep 64) p.230-2

**HEATING, Effect on diffusion, Hydroxyl groups, Fused silica. See SILICA, Fused, Hydroxyl groups, Diffusion, Effect of heating****HEATING, Effect on low intensity light sensitivity, Emulsions, Films, Monitors, Industrial health, Radioactivity. See RADIOACTIVITY, Industrial health, Monitors, Films, Emulsions, Sensitivity (Low intensity light) Effect of heating****HEATING, Electric**

Industrial process heating by electricity. G. C. Gracey & W. G. Evans. *Steam & Heating Engr.*, 33 (May 64) p.46-50. il.

**HEATING, Electric, Elements, Design**

Factors in heating element design. R. Tervo. *Electrical Manufacture*, 8 (Nov 64) p.4+. il.

**HEATING, Electric, Elements, Research**

Swedish research on heating element wire [Aktiebolaget Kanthal] *Electrical Rev.*, 175 (17 Jul 64) p.96-7. il.

**HEATING, Electric, Elements, Tape**

Flat element heating tapes [Hotfoil Ltd.] *Light Production Engng.*, 2 (Jul 64) p.18. il.

**HEATING, Electric, Floors, Cattle housings. See CATTLE, Housings, Floors, Heating, Electric****HEATING, Electric, Forehearth, Furnaces, Melting, Glass. See GLASS, Melting, Furnaces, Forehearth, Heating, Electric****HEATING, Electric, Greenhouses. See GREENHOUSES, Heating, Electric****HEATING, Electric, Houses. See HOUSES, Heating, Electric****HEATING, Electric, Housing. See HOUSING, Heating, Electric****HEATING, Electric, Housing, Effect on load factor, Electric power systems. See ELECTRIC POWER SYSTEMS, Load factor, Effect of domestic space heating****HEATING, Electric, Passenger rolling stock, Railways. See ROLLING STOCK (Passenger, Railways) Heating, Electric****HEATING, Electric, Ski lodges. See SKI LODGES, Heating, Electric****HEATING, Electric, Stress relieving, Welded steel structures. See STRUCTURES, Steel, Welded, Stress relieving, Heating, Electrical resistance****HEATING, Electric, Surface**

Flexible electric heaters for process plants. G. C. Gracey. *Steam & Heating Engr.*, 33 (Mar 64) p.52-5. il.

**HEATING, Electric, Tubes, Glass, Conductive**

Glass tubes as heating elements. H. C. Bevan. *Electrical Manufacture*, 8 (May 64) p.12+

**HEATING, Electron beam machining. See ELECTRON BEAM MACHINING, Heating****HEATING, Elevated motorways. See MOTORWAYS, Elevated, Heating****HEATING, Equipment, Corrosion, Vanadium (Residual fuel oil) Prevention, Refractory coatings**

Use of refractory coatings to prevent vanadium corrosion. P. D. Cady. *Engrs' Digest*, 24 (Dec 63) p.73-4

**HEATING, Equipment, Manufactures, Factories**

Colt at Havant. *Industrial Architecture*, 7 (Aug 64) p.557-8. il.

Colt moves factory to the country. *Heating & Ventilating Engr.*, 38 (Jul 64) p.50-2. il.

Copperad project at Wolverton. *Industrial Architecture*, 7 (Aug 64) p.545. il.

Further development likely at Colt Ventilation's £400,000 Havant factory. *Contract J.*, 199 (18 Jun 64) p.883-4. il.

New Colt factory. *Steam & Heating Engr.*, 33 (Sep 64) p.25-7. il.

New factory sets an example to its own customers [Colt Ventilation & Heating Ltd.] *Consulting Engr.*, 26 (Aug 64) p.180. il.

**HEATING, Factories, Motor car manufactures. See MOTOR CARS, Manufactures, Factories, Heating****HEATING, Factories, Wood manufactures. See WOOD, Manufactures, Factories, Heating****HEATING, Flash, Carbonisation, Coal. See COAL, Carbonisation, Flash heating****HEATING, Flats. See FLATS, Heating****HEATING, Fuel elements, Magnox nuclear reactors. See NUCLEAR REACTORS, Magnox, Fuel elements, Heating****HEATING, Garages, Commercial vehicles. See VEHICLES, Commercial, Garages, Heating****HEATING, Gas-fired, Baking, Cake. See CAKE, Baking, Heating, Gas-fired****HEATING, Gas-fired, Buildings. See BUILDINGS, Heating, Gas****HEATING, Gas-fired, Can manufactures, Food. See FOOD, Cans, Manufactures, Heating, Gas-fired****HEATING, Gas-fired, Chains manufactures. See CHAINS, Manufactures, Heating, Gas-fired****HEATING, Gas-fired, Commercial buildings. See COMMERCIAL BUILDINGS, Heating, Gas-fired****HEATING, Gas-fired, Cremators. See CREMATORS, Heating, Gas****HEATING, Gas-fired, Die cast zinc alloy model manufacture, Toys. See TOYS, Scale models, Zinc alloys, Die cast, Manufactures, Heating, Gas-fired****HEATING, Gas-fired, Drying, Candlewick bedspreads. See BEDSPREADS, Candlewick, Drying, Heating, Gas-fired****HEATING, Gas fired, Drying, Coatings, Roof racks, Motor cars. See MOTOR CARS, Racks (Roofs) Coatings, Drying, Heating, Gas-fired****HEATING, Gas-fired, Drying, Fur. See FUR, Drying, Heating, Gas-fired****HEATING, Gas-fired, Electric cable manufactures. See CABLES, Electric, Manufactures, Heating, Gas-fired****HEATING, Gas fired, Fluorescent pigments manufactures. See PIGMENTS, Fluorescent, Manufactures, Heating, Gas-fired****HEATING, Gas-fired, Glassware manufactures. See GLASSWARE, Manufactures, Heating, Gas-fired****HEATING, Gas-fired, Houses. See HOUSES, Heating, Gas****HEATING, Gas-fired, Paint manufacture. See PAINT, Manufacture, Heating, Gas-fired****HEATING, Gas-fired, Prefabricated housing. See HOUSING, Prefabrication, Heating, Gas**



- HEATING, Gas-fired, Public buildings. See PUBLIC BUILDINGS, Heating, Gas-fired
- HEATING, Gas-fired, Radiator manufactures, Motor cars. See MOTOR CARS, Radiators, Manufactures, Heating, Gas-fired
- HEATING, Gas-fired, Rolling, Aluminium sheets. See SHEETS, Aluminium, Rolling, Heating, Gas-fired
- HEATING, Gas-fired, Smoking, Bacon. See BACON, Smoking, Heating, Gas-fired
- HEATING, Gas-fired, Spit roasting, Meat. See MEAT, Spit roasting, Heating, Gas
- HEATING, Gas-fired, Spraying, Nickel alloys, Protection, Moulds, Glass bottles manufactures. See BOTTLES, Glass, Manufactures, Moulds, Protection, Nickel alloys, Spraying, Heating, Gas-fired
- HEATING, Gas-fired, Steel production. See STEEL, Production, Heating, Gas-fired
- HEATING, Gas-fired, Stoving, Paint, Bodies, Motor cars. See MOTOR CARS, Bodies, Paint, Stoving, Heating, Gas-fired
- HEATING, Gas-fired, Stoving, Paint, Electrical engineering components. See ELECTRICAL ENGINEERING, Components
- HEATING, Gas-fired, Telephone coin box manufactures. See TELEPHONY, Coin boxes, Manufactures, Heating, Gas-fired
- HEATING, Gas-fired, Textiles manufactures. See TEXTILES, Manufactures, Heating, Gas
- HEATING, Gas-fired, Type founding. See TYPE FOUNDED, Heating, Gas-fired
- HEATING, Gas-fired, Warehouses, Storage, Town gas appliances. See GAS (Town) Appliances, Storage, Warehouses, Heating, Gas-fired
- HEATING, Gas-fired, Water, Housing. See HOUSING, Water, Heating, Gas-fired
- HEATING, Gas-fired, Water, Scalding, Pigs. See PIGS, Scalding, Water, Heating, Gas-fired
- HEATING, Gas-fired, Water, Shower baths. See SHOWERS, Baths, Water, Heating, Gas
- HEATING, Gas-fired, Web dryers, Rotary machines, Printing. See PRINTING, Machines, Rotary, Web dryers, Gas-fired
- HEATING, Greenhouses, Parks. See PARKS, Greenhouses, Heating
- HEATING, Hospitals. See HOSPITALS, Heating
- HEATING, Hot water, Equipment, Air entrainment**  
Effects of air heating systems. P. Brennan. *Heating & Air Conditioning*, 32 (Jan 64) p.30-2. il.
- HEATING, Hot water, High pressure**  
High pressure hot water: comparison of heating methods by H.W. and steam, and factors concerning the correct operation of H.P.H.W. system. J. N. Williams. *Power & Works Engng.*, 59 (Aug 64) p.16-21. il.  
High pressure hot water in practice. L. E. Tremayne. *Fuel Efficiency*, 12 (Nov 64) p.21+. il.
- HEATING, Houses. See HOUSES, Heating
- HEATING, Housing. See HOUSING, Heating
- HEATING, Housing, Air pollution. See AIR POLLUTION, Domestic heating
- HEATING, Immersion, Liquids. See LIQUIDS, Heating, Immersion
- HEATING, Induction, Equipment**  
Induction-heated reaction vessels for the chemical industry. P. B. Allison. *A.E.I. Engng.*, 4 (Jul/Aug 64) p.210-14. il.
- HEATING, Induction, Plastics manufactures. See PLASTICS, Manufactures, Heating, Induction
- HEATING, Industrial buildings. See INDUSTRIAL BUILDINGS, Heating
- HEATING, Laboratories, Railways. See RAILWAYS, Laboratories, Heating
- HEATING, Liquefied petroleum gas-fired, Equipment**  
L.P. gases today, pt.5: modern appliances meet varied needs. *Fuel Efficiency*, 12 (Mar 64) p.36+. il.
- HEATING, Low voltage, Curing, Adhesives, Wood furniture manufactures. See FURNITURE, Wood, Manufactures, Adhesives, Curing, Low voltage heating
- HEATING, Low voltage, Curing, Adhesives, Wood manufactures. See WOOD, Manufactures, Adhesives, Curing, Heating, Low voltage
- HEATING, Market buildings. See MARKETS, Buildings, Heating
- HEATING, Medical schools. See MEDICAL SCHOOLS, Heating
- HEATING, Microwave, Pre-cooked food. See FOOD, Pre-cooked, Microwave heating
- HEATING, Mobile cinemas. See CINEMAS, Mobile, Heating
- HEATING, Motor cars. See MOTOR CARS, Heating
- HEATING, Nylon yarn processing. See YARNS, Nylon, Processing, Heating
- HEATING, Office buildings. See OFFICE BUILDINGS, Heating
- HEATING, Official residences. See OFFICIAL RESIDENCES, Heating
- HEATING, Oil-fired, Buildings. See BUILDINGS, Heating, Oil-fired
- HEATING, Oil-fired, Cinemas. See CINEMAS, Heating, Oil-fired
- HEATING, Oil-fired, Factories. See FACTORIES, Heating, Oil-fired
- HEATING, Oil-fired, Flats. See FLATS, Heating, Oil-fired
- HEATING, Oil-fired, Flue gas, Carbon, Measurement**  
Accurate measurement of flue gas carbon [Thornton Carbon Determination Apparatus] Oil Firing, 7 (Apr 64) p.33. il.
- HEATING, Oil-fired, Flue gas, Dust, Measurement, Filters, Silica wool**  
Measurement of the flue gas solids burden from oil-fired installations using a silica wool filter. L. K. Rendle. *J. of Inst. of Fuel*, 37 (Jan 64) p.25-30. il. refs.
- HEATING, Oil-fired, Fuel storage tanks**  
Storage tanks for oil-fired installations. S. H. West. *Oil Firing*, 6 (Jan 64) p.27-9
- HEATING, Oil-fired, Greenhouses, Cucumbers. See CUCUMBERS, Greenhouses, Heating, Oil-fired
- HEATING, Oil-fired, Houses. See HOUSES, Heating, Oil-fired
- HEATING, Oil-fired, Housing. See HOUSING, Heating, Oil-fired
- HEATING, Oil-fired, Tanks, Storage, Bitumen. See BITUMEN, Storage, Tanks, Heating, Oil-fired
- HEATING, Oil-fired, Water, Housing. See HOUSING, Water, Heating, Oil-fired
- HEATING, Oil-fired, Water, Swimming baths. See SWIMMING BATHS, Water, Heating, Oil-fired
- HEATING, Paint. See PAINT, Heating
- HEATING, Papermaking. See PAPERMAKING, Heating
- HEATING, Prison vans. See PRISON VANS, Heating
- HEATING, Prisons. See PRISONS, Heating
- HEATING, Public houses. See PUBLIC HOUSES, Heating
- HEATING, R.F., Curing, Adhesives, Joinery. See JOINERY, Adhesives, Curing, Heating, R.F.
- HEATING, R.F., Curing, Adhesives, Lipping, Fibre board. See FIBRE BOARD, Lipping, Adhesives, Curing, Heating, R.F.
- HEATING, R.F., Curing, Adhesives, Wood manufactures. See WOOD, Manufactures, Adhesives, Curing, Heating, R.F.
- HEATING, Radiant, Houses. See HOUSES, Heating, Radiant
- HEATING, Railway stations. See RAILWAYS, Stations, Heating
- HEATING, Recreation centres. See RECREATION CENTRES, Heating
- HEATING, Retail shops. See SHOPS, Retail, Heating
- HEATING, Roads. See ROADS, Heating
- HEATING, Rollers. See ROLLERS, Heating

- HEATING, Rolling stock, Passenger, Railways. See ROLLING STOCK (Passenger, Railways) Heating
- HEATING, Schools. See SCHOOLS, Heating
- HEATING, Shell mould manufactures. See MOULDS, Shell, Manufactures, Heating
- HEATING, Soil, Football grounds. See FOOTBALL GROUNDS, Soil, Heating
- HEATING, Steam, Equipment, Air entrainment**  
Effects of air in heating systems. P. Brennan. Heating & Air Conditioning, 32 (Jan 64) p.30-2. il.
- HEATING, Steam, Petroleum, Tankers. See TANKERS, Ships, Petroleum, Heating, Steam
- HEATING, Swimming baths. See SWIMMING BATHS, Heating
- HEATING, Tall buildings. See BUILDINGS, Tall, Heating
- HEATING, Textile manufactures. See TEXTILES, Manufactures, Heating
- HEATING, Theatres. See THEATRES, Heating
- HEATING, Towers, Aerials, Microwave radio. See RADIO, Microwave, Aerials, Towers, Heating
- HEATING, Town gas research laboratories. See GAS (Town) Research, Laboratories, Heating
- HEATING, University buildings. See UNIVERSITY BUILDINGS, Heating
- HEATING, Vegetable oil processing. See OILS, Vegetable, Processing, Heating
- HEATING, Walls, Turbulent flow, Fluids. See FLUIDS, Flow, Turbulent, Walls, Heating
- HEATING, Warehouses, Storage, Motor car parts. See MOTOR CARS, Parts, Storage, Warehouses, Heating
- HEATING, Water. See WATER, Heating
- HEATING, Water, Housing. See HOUSING, Water, Heating
- HEATING, Water, Nuclear power stations. See NUCLEAR POWER STATIONS, Water, Heating
- HEATING, Water oxidation, Glycine. See GLYCINE, Oxidation, Water, Heat evolution
- HEATING, Water oxidation, Wool. See WOOL, Oxidation, Water, Heat evolution
- HEATING, X-ray diffractometer attachments. See X-RAYS, Diffractometers, Heating attachments
- HEAVY HYDROGEN. See DEUTERIUM
- HEAVY MEDIUM FLOTATION, Coal. See COAL, Flotation, Heavy medium
- HEAVY MEDIUM FLOTATION, Fluorspar. See FLUORSPAR, Flotation, Heavy medium
- HEAVY WATER MODERATED NUCLEAR REACTORS. See NUCLEAR REACTORS, Heavy water moderated
- HECTORITE, Lubricating greases, Steel production plant. See STEEL, Production, Plant, Lubricating greases, Hectorite
- HEDGING, Machines, Tractor-mounted**  
Tractor-mounted hedge-cutters. Practical Power Farming, 33 (Sep 64) p.10+. il.
- HEDLUND SPECIAL MOTOR CYCLES. See MOTOR CYCLES, Types, Hedlund Special
- HEEL CONTROL, Loading, Ships. See SHIPS, Loading, Heel control
- HEIDELBERG  
See  
ROADS, Town planning, Heidelberg
- HEIGHT, Gauges, Digital read out**  
Chesterman-Sogenique electronic height gauge. Machinery, 105 (23 Sep 64) p.761-2. il.  
Digital read-out improves height gauge usage. Metalworking Production, 108 (25 Mar 64) p.67-8. il.
- HELICAL AERIALS. See AERIALS, Helical
- HELICAL-COIL DISTILLATION COLUMNS. See DISTILLATION, Columns, Helical-coil
- HELICAL FLOW, Non-Newtonian fluids. See FLUIDS, Non-Newtonian, Flow, Helical
- HELICAL GEARS. See GEARS, Helical
- HELICAL SPRINGS. See SPRINGS, Helical
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HOUSES, Prefabricated, Hinteregger system

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HOBBING, Helical gears. See GEARS, Helical, Hobbing

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HOISTS

LIFTING, Shackles

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HOMOGENEOUS CHEMICAL REACTIONS. See CHEMICAL REACTIONS, Homogeneous

HOMOGENISED MAGNESIUM-ZIRCONIUM, Cans, Fuel elements, Nuclear reactors. See NUCLEAR REACTORS, Fuel elements, Cans, Magnesium-Zirconium, Homogenised

# **HOMOGENISERS**

Related Headings:

MICRO-HOMOGENISERS



HOMOGENISERS, Milk. See MILK, Homogenisers

HOMOGENISERS, Ultrasonic, Textiles manufacture. See

TEXTILES, Manufactures, Homogenisers, Ultrasonic

HOMOPOLAR D.C. ELECTRICAL GENERATORS. See GENERATORS, Electrical, D.C., Homopolar

HOMOVALENT IMPURITIES, Metals. See METALS, Impurities, Homovalent

HONDA 50 MOTOR CYCLES. See MOTOR CYCLES, Types, Honda 50

HONDA C200 MOTOR CYCLES. See MOTOR CYCLES, Types, Honda C200

HONDA CB 72 MOTOR CYCLES. See MOTOR CYCLES, Types, Honda CB 72

HONDA CB 92 MOTOR CYCLES. See MOTOR CYCLES, Types, Honda CB 92

HONDA CB 160 SPORTS MOTOR CYCLES. See MOTOR CYCLES, Types, Honda CB 160 Sports

HONDA-METISSE MOTOR CYCLES. See MOTOR CYCLES, Types, Honda-Metisse

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HONEYDEW, Determination in honey. See HONEY, Determination of honeydew

HONG KONG

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COTTON, Industry, Hong Kong

DAMS, Reservoirs, Hong Kong

HOSPITALS, Hong Kong

PORTS, Traffic, Cross-harbour, Surveys, Hong Kong

TOWN PLANNING, Tsuen Wan

VILLAGES, Walled, Hong Kong

WATER, Engineering, Hong Kong

HONING

Related Headings:

DIAMOND HONING

HONING, Bores, Steel, Pipes, Hydraulic machinery. See HYDRAULIC MACHINERY, Pipes, Steel, Bores, Honing

HONING, Bores, Steel, Pipes, Pneumatic machinery. See PNEUMATIC MACHINERY, Pipes, Steel, Bores, Honing

HOOK STOPS, Dies, Blanking. See BLANKING, Dies, Stops, Hook

HOOPS, Frames, Bodies, Vans. See VANS, Bodies, Frames, Hoops

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EPINEPHRINE

OESTROGENS

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HORN AERIALS, Radio links, Television. See TELEVISION, Radio links, Aerials, Horn

HORNCHURCH

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TOWN PLANNING, Hornchurch

HORNS, Waveguides. See WAVEGUIDES, Horns

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CHRONOMETERS

CLOCKS

WATCHES

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HORTICULTURAL EQUIPMENT

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**HOT DIPPING, Galvanising, Wires.** See **WIRES, Galvanising, Hot dip**

**HOT EXTRUSION, Aluminium.** See **ALUMINIUM, Extrusion, Hot**

**HOT EXTRUSION, Powder metallurgy.** See **POWDER METALLURGY, Extrusion, Hot**

**HOT FOIL STAMPING, Containers.** See **CONTAINERS, Stamping, Hot foil**

**HOT FOIL STAMPING, Plastics.** See **PLASTICS, Stamping, Hot foil**

**HOT HARDNESS, Aluminium alloys.** See **ALUMINIUM, Alloys, Hardness, Hot**

**HOT HARDNESS, Cast chromium-iron.** See **IRON-CHROMIUM, Cast, Hardness, Hot**

**HOT HARDNESS, Castings, Iron.** See **IRON, Castings, Hardness, Hot**

**HOT HARDNESS, Lead.** See **LEAD, Hardness, Hot**

**HOT ISOSTATIC COMPACTION, Powders.** See **POWDERS, Compaction, Gas pressure bonding**

**HOT METAL SLABS.** See **SLABS, Metal, Hot**

**HOT MOULDING, Wood hulls, Motor boats.** See **BOATS, Motor, Hulls, Wood, Moulding, Hot**

**HOT PIERCING, Steel, Tubes.** See **TUBES, Steel, Piercing, Hot**

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**HOT PRESSING, Powder metallurgy, Beryllium.** See **BERYLLIUM, Powder metallurgy, Hot pressing**

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**HOT ROLLING, Steel, Rings.** See **RINGS, Steel, Rolling, Hot**

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**HOT STRETCHING, Nylon fibres, Reinforced rubber.** See **RUBBER, Reinforced, Nylon fibres, Hot stretching**

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**HOT TEARING, Castings.** See **CASTINGS, Hot tearing**

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**HOT WATER, Thermal storage, Heating, Housing.** See **HOUSING, Heating, Thermal storage, Hot water**

**HOT WATER HEATING, Housing.** See **HOUSING, Heating, Hot water**

**HOT WATER HEATING, Railway stations.** See **RAILWAYS, Stations, Heating, Hot water**

**HOT WORKABILITY, Steel.** See **STEEL, Workability, Hot**

**HOT WORKED ARMCO IRON.** See **IRON, Armco, Hot worked**

**HOT WORKING**

Related Headings:

AUSFORMING

**HOTELS**

Related Headings:

MOTELS

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DISHWASHERS

FRYING PANS

KITCHENWARE

SHOWERS, Baths

TEA MAKING APPLIANCES—ALARM CLOCKS

VACUUM CLEANERS

WASHING MACHINES

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HOUSES—SUBHEADINGS—*Synopsis*

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

- Standards
- Costs
  - Quantity surveying*
- Problems
  - Construction defects*
  - Privacy requirement*
  - Town planning*
- Technical activities
  - Design*
  - Maintenance*
  - Modernisation*
  - Interior decoration*
- Building materials*
- Parts and services
  - Frames*
  - Panels*
  - Roofs*
  - Floors*
  - Staircases*
  - Heating*
  - Insulation*
  - Electrical installations*
  - Seats, Built-in*
  - Tables, Built-in*
- Kinds of houses
  - By period
    - Georgian*
  - By material
    - Wood*
    - Plywood*
    - Stone*
    - Concrete*
    - Asbestos cement*
  - By method of construction
    - Prefabricated*
    - Mobile*
  - By form
    - Open-plan*
    - Hexagonal*
    - Trapezoidal*
  - By occupant
    - Maladjusted children*

HOUSES, **Asbestos cement, Prefabricated**

- New Zealand A-frame house. *Industrialised building*, 1 (Sep 64) p.18-19. *il.*

HOUSES, **Building materials, Plastics**

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- Case of furniture beetle attack in old ships timbers used in house construction. M. McCoy-Hill. *Wood*, 29 (Sep 64) p.48-9. *il.*

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**HOUSING****Related Headings:**

BUNGALOWS  
FLATS  
HOUSES  
LIVING ROOMS  
ROCK DWELLINGS

**HOUSING—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

**Particular localities**

*Great Britain*  
*England*  
*London*  
*Bethnal Green*  
*Chelsea*  
*Roehampton*



## HOUSING—SUBHEADINGS—Synopsis—cont.

- England—cont.
  - Shoreham
  - Gloucester
  - Bedford
  - Leicester
  - Birmingham
  - Sheffield
- Scotland
  - Edinburgh
  - Glasgow
- Wales
  - Caerphilly
- Belgium
- Germany
  - West Berlin
- Greece
- South America
  - Chile
    - Santiago
    - Arica
- Problems
  - Hygiene
  - Town Planning
  - Roads
- Technical activities
  - Maintenance
  - Modernisation
  - Prefabrication
  - Interior decoration
- Building materials
- Parts & Services
  - Exteriors
  - Roofs
  - Insulation
  - Cladding
  - Windows
  - Heating
  - Lighting
  - Electrical installations
  - Pipes
  - Sewers
  - Sanitary ware
  - Water
  - Storage facilities
- Types of housing
  - By Material
    - Concrete
    - Steel
  - By particular group of occupants
    - Disabled persons
    - Old people

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Estadio neighbourhood, Arica. Architectural Design, 34 (Apr 64) p.186-7. il.

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Housing in a medium-sized district (extracts) F. W. Dawkes. Surveyor, 124 (4 Jul 64) p.35-7

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Housebuilding in Belgium: industrialised replacements for traditional homes. Builder, 207 (11 Dec 64) p.1271-2

**HOUSING, Bethnal Green**

Housing project, Bethnal Green. Builder, 206 (3 Jan 64) p.9-10. il.

**HOUSING, Birmingham**

Housing redevelopment, Birmingham. Architect & Building News, 226 (9 Dec 64) p.1121-4. il.

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Projected redevelopment, London SW3 for the Metropolitan Borough of Chelsea. Builder, 205 (27 Dec 63) p.1311-12. il.

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Lead flashings for tile hanging. Architects' J., 140 (23 Sep 64) p.689. il.

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Precision engineering in concrete casting: first licence of Camus for Liverpool area. Building Engr., 82 (Aug 64) p.158-9. il.

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**HOUSING, Old people**

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FLATS, Old people

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*History**Particular countries*

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*France*  
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*Research**Simulation**Model tests**Properties*

*Stability*  
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*Accessories*

*Performance**Types*

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*Rail guided*  
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**HYDRAULIC DYNAMOMETERS.** See **DYNAMOMETERS, Hydraulic**

**HYDRAULIC ENGINEERING**

Related Headings:

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**COASTAL WORKS**  
**CULVERTS**  
**DAMS**  
**DISCHARGE, Coefficient of**  
**DIVING**  
**DREDGERS**  
**DREDGING**  
**ESTUARIES, Siltation**  
**FLOOD CONTROL**

**HYDRAULIC ENGINEERING**

## Related Headings—cont.

**HYDRAULIC JUMP****IRRIGATION****LAKES****LOCKS, Waterways****PENSTOCKS****PETROLEUM, Handling, Ports, Hydraulic engineering****PORTS, Hydraulic engineering****RIVERS****SEA, Hydraulic engineering****SEWAGE, Treatment, Hydraulic engineering****SLUICE GATES****SUBMARINE STRUCTURES****TIDES****WATERCOURSES****WEIRS****HYDRAULIC ENGINEERING, Laboratories, Architecture**

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**Engineers, Teaching, Laboratories, Hydraulic equipment**

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**GRINDING, Machines, Feed units, Hydraulic**

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TRITIUM

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**INTERIOR DECORATION**

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PAPERHANGING

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- INTERIOR DECORATION, Houses. See HOUSES, Interior decoration
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- INTERIOR DECORATION, Industrial buildings. See INDUSTRIAL BUILDINGS, Interior decoration
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- INTERIOR DECORATION, Restaurants. See RESTAURANTS, Interior decoration
- INTERIOR DECORATION, Retail shops. See SHOPS, Retail, Interior, Decoration
- INTERIOR DECORATION, Studies, Rooms. See STUDIES, Rooms, Interior decoration
- INTERIOR DECORATION, Studios, Films, Television. See TELEVISION, Films, Studios, Interior decoration
- INTERIOR DECORATION, Studios, Sound films. See SOUND FILMS, Recording, Studios, Interior decoration
- INTERIOR DESIGN, Aircraft. See AIRCRAFT, Interior design
- INTERIOR DESIGN, Art galleries. See ART GALLERIES, Interior design
- INTERIOR DESIGN, Banks. See BANKS, Interior design
- INTERIOR DESIGN, Buildings. See BUILDINGS, Interior design
- INTERIOR DESIGN, Buses. See BUSES, Interior design
- INTERIOR DESIGN, Canteens. See CANTEENS, Interior design
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- INTERIOR DESIGN, Clubhouses. See CLUBHOUSES, Interior design
- INTERIOR DESIGN, Factories. See FACTORIES, Interior design
- INTERIOR DESIGN, Framed buildings. See BUILDINGS, Framed, Interior design
- INTERIOR DESIGN, Hairdressing salons. See HAIRDRESSING SALONS, Interior design
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- ION EXCHANGE**, Purification, Feedwater, Boilers. See **BOILERS**, Feedwater, Treatment, Ion exchange
- ION EXCHANGE**, Purification, Hydrobromic acid. See **HYDROBROMIC ACID**, Purification, Ion exchange
- ION EXCHANGE**, Purification, Water, Electrical equipment manufacture. See **ELECTRICAL EQUIPMENT**, Manufactures, Water, Purified, Ion exchange
- ION EXCHANGE**, Resins, Chromatography, Amino acids. See **AMINO ACIDS**, Chromatography, Ion exchange resins
- ION EXCHANGE**, Resins, Hydrofluoric acid-Hydrochloric acid, Solvent extraction, Refractory metals. See **METALS**, Refractory, Solvent extraction (Hydrofluoric acid-Hydrochloric acid) Ion exchange resins
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- IONISATION CHAMBERS**, Ultraviolet radiation. See **ULTRAVIOLET RADIATION**, Ionisation chambers
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- IONS**, Metals, Linking, Thermoplastics. See **THERMOPLASTICS**, Metal ion linked
- IONS**, Positive  
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- IONS**, Positive, Klystron oscillators. See **OSCILLATORS**, Klystron, Positive ion

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**IRELAND**

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DUBLIN. UNIVERSITY COLLEGE  
ELECTRICAL INSTALLATIONS, Apprenticeships, Ireland  
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**IRON**

Related Headings:  
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**IRON-SUBHEADINGS-Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

*History**Properties**Metallurgy**Strain hardening**Thermal transformations**Chemistry**Nitrogen desorption**Oxidation**Corrosion**Passivation**Technical activities**Ores**Mining**Analysis**Determination**Solvent extraction**Production**Manufactures**Foundry practice**Casting**Powder metallurgy**Coatings**Types of Iron**Liquid**Pig**Cast**Grey**White**Nodular**Malleable**Cold worked**Armco**Bainitic**Alloys**Products**Castings**Scrap***IRON, Alloys, Briquetting**

Ferro-alloy production at the Glossop Works of Union Carbide, Limited. *Foundry Trade J.*, 117 (10 Sep 64) p.320-2. il.

**IRON, Alloys, Embrittlement (Grain boundaries) Sulphides**

Formation of sulphides at grain boundaries in some pure iron alloys. I. S. Brammar & R. W. K. Honeycombe. *J. of Iron & Steel Inst.*, 202 (Apr 64) p.335-42. il. refs.

**IRON, Alloys, Liquid-Solid equilibria**

Liquidus solidus relations in iron alloys: ideal solutions. W. Hume-Rothery & R. A. Buckley. *J. of Iron & Steel Inst.*, 202 (Jun 64) p.531-3. refs.

**IRON, Anodes. See ANODES, Iron****IRON, Armco, Hot worked, Mechanical properties**

Warm working of Armco iron. A. Younger & M. G. Cockcroft. *Metal Treatment*, 31 (Aug 64) p.296-306. il. refs.

**IRON, Armco, Precompressed (Liquid nitrogen) Ductility**

Effect of low temperature precompression on the ductility of iron. Q. W. Sleeswyk, J. N. Helle & A. de Geus. *J. of Iron & Steel Inst.*, 202 (Apr 64) p.330-4. il. refs.

**IRON, Armco, Strain-aged, Fatigue**

Influence of ageing processes on the fatigue limit of a body-centred-cubic iron. P. O. Kettunen. *J. of Iron & Steel Inst.*, 202 (Mar 64) p.209-15. il. refs.

**IRON, Bainitic, Acicular structure, Effect of tungsten**

Acicular irons containing tungsten. T. J. Glover.  
B.C.I.R.A. Journal, 12 (Nov 64) p.738-48. il. refs.

**IRON, Cast**

Progress and problems in the understanding of cast irons.  
H. Morrogh. Brit. Foundryman, 57 (Jul 64) p.297-307.  
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**IRON, Cast**

Related Headings:  
CUPOLAS  
MEEHANITE

**IRON, Cast, Agricultural equipment.** See AGRICULTURAL EQUIPMENT, Iron, Cast

**IRON, Cast, Air compressor components.** See AIR COMPRESSORS, Components, Iron, Cast

**IRON, Cast, Blocks, Engines, Motor cars.** See MOTOR CARS, Engines, Blocks, Iron, Cast

**IRON, Cast, Carbon equivalent, Determination**

Basic principles of carbon-equivalent determination and dip-temperature measurement of cast iron. R. L. Carden.  
Instrument Engr., 4 (Oct 64) p.26-8. il. refs.

**IRON, Cast, Chill, Depth, Determination, Ultrasonics**

Measurement of chill depth on cast iron test pieces and rolls. J. L. Smith & A. G. Fuller. B.C.I.R.A. Journal, 12 (May 64) p.319-26. il. refs.

**IRON, Cast, Chill, Mottle defects**

Chill and mottle formation in cast iron: review of the literature. J. W. Boyes & A. G. Fuller. B.C.I.R.A. Journal, 12 (Jul 64) p.424-72. il. refs.

**IRON, Cast, Corrosion**

Anti-corrosion work on cast iron: British Corrosion Laboratories—BCIRA. H. H. Collins. Corrosion Technology, 11 (Oct 64) p.35-7. il. refs.

**IRON, Cast, Determination of aluminium, Spectrofluorimetry**

Determination of aluminium in cast iron and steel using the EEL fluorimeter. H. Green, M. Laband & M. A. Bryan.  
B.C.I.R.A. Journal, 12 (Nov 64) p.749-53. il. refs.

**IRON, Cast, Determination of boron, Titrations**

Determination of boron contents greater than 0.1 per cent in cast iron. W. E. Clarke & R. Norbury. B.C.I.R.A. Journal, 12 (Nov 64) p.787-90. refs.

**IRON, Cast, Determination of carbon, Oxidation, Diffusion controlled**

Diffusion controlled oxidation of carbon in nickel and other metals as a basis of analysis. E. F. Rickard. Analyst, 89 (Apr 64) p.235-41. il. refs.

**IRON, Cast, Determination of nickel, Complexometric analysis, Dimethylglyoxime, Titration, E.D.T.A.**

Determination of nickel in cast iron using dimethylglyoxime precipitation and E.D.T.A. titration. H. Green & P. J. Rickards. B.C.I.R.A. Journal, 12 (Sep 64) p.578-80. refs.

**IRON, Cast, Determination of uranium**

Determination of uranium in cast iron. H. Green. B.C.I.R.A. Journal, 12 (Sep 64) p.632-3. refs.

**IRON, Cast, Drums, Brakes, Motor vehicles.** See MOTOR VEHICLES, Brakes, Drums, Iron, Cast

**IRON, Cast, Enamelling, Stoving, Furnaces, Electric**

Continuous enamelling by an unusual twin tunnel electric straight through furnace. Corrosion Prevention & Control, 11 (Oct 64) p.30-3. il.

**IRON, Cast, Graphite, Effect of bismuth**

Changes in morphology of graphite in bismuth-treated cast irons. J. Pelleg. Iron & Steel Inst. J., 202 (Sep 64) p.739-45. il. refs.

**IRON, Cast, Graphite, Widmanstätten structure, Effect of Lead-Hydrogen**

Combined effects of lead and hydrogen in producing Widmanstätten graphite in grey cast iron. I. C. H. Hughes & G. Harrison. B.C.I.R.A. Journal, 12 (May 64) p.340-60. il. refs.

**IRON, Cast, Haematite, Tensile strength**

Tensile strength of hematite irons. E. R. Evans. B.C.I.R.A. Journal, 12 (Mar 64) p.135-40. il. refs.

**IRON, Cast, Heat-resistant**

Cast heat-resisting ferrous alloys. R. H. T. Dixon & J. Cumberland. Foundry Trade J., 116 (11 Jun 64) p.721-6. il.

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**IRON, Cast, Industry**

Future of the iron and steel industry: extracts from the Iron & Steel Board's special report. Foundry Trade J., 117 (26 Nov 64) p.706-7

**IRON, Cast, Internal combustion engine components.** See ENGINES (Internal combustion) Components, Cast iron

**IRON, Cast, Mechanical properties**

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**IRON, Cast, Melting, Furnaces, Electric**

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**IRON, Cast, Microstructure, Effect of stresses**

Variations of the microstructure of a flake graphite cast iron after stressing in tension and compression. G. N. J. Gilbert. Brit. Cast Iron Research Ass. J. (B.C.I.R.A. Journal), 12 (Jan 64) p.31-47. il. refs.

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**IRON, Cast, Pearlitic, Stress relaxation**

Relaxation of pearlitic cast iron. V. de L. Davies, B. Augland & N. Christensen. J. of Iron & Steel Inst., 202 (Apr 64) p.343-6. il. refs.

**IRON, Cast, Pins, Crankshafts, Compressors, Refrigerators.** See REFRIGERATORS, Compressors, Crankshafts, Pins, Cast iron

**IRON, Cast, Pipes.** See PIPES, Iron, Cast

**IRON, Cast, Pipes, Sewers.** See SEWERS, Pipes, Iron, Cast

**IRON, Cast, Research**

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**IRON, Cast, Rolls.** See ROLLS, Iron, Cast

**IRON, Cast, Strength, Testing, Wedge penetration**

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**IRON, Cast, Swarf, Melting, Cupolas**

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**IRON, Cast, Valve components.** See VALVES, Components, Iron, Cast



**IRON, Cast-Tin, Blocks, Cylinders, Engines, Motor vehicles.**  
See **MOTOR VEHICLES, Engines, Cylinders, Blocks, Iron, Cast-Tin**

### **IRON, Casting**

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### **IRON, Casting, Moulds, Sand, Green, Stability, Effect of coal dust**

Stability of green sand moulds with additions of coal dust or coal tar pitches. K. E. L. Nicholas, W. R. Roberts & A. Guthrie. *B.C.I.R.A. Journal*, 12 (Nov 64) p.808-19. il. refs.

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### **IRON, Castings**

Advantages of producing components as iron castings. J. P. Scholes. *B.C.I.R.A. Journal*, 12 (Jul 64) p.495-506. il.

### **IRON, Castings (Enamelling, Vitreous, Wet process)**

Composition and preparation of iron castings for wet-process vitreous enamelling. J. V. Dawson. *Foundry Trade J.*, 116 (26 Mar 64) p.385-93. il. refs.

Composition and preparation of iron casting for wet-process vitreous enamelling. J. V. Dawson. *Metal Finishing J.*, 10 (Mar 64) p.103-10. il. refs.

### **IRON, Castings, Hardness, Hot**

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### **IRON, Castings, Heat treatment**

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### **IRON, Castings (High pressure mould) Rat-tail defects**

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### **IRON, Castings, Porosity**

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### **IRON, Coatings**

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### **IRON, Coatings, Epoxy resins**

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### **IRON, Corrosion, Sulphate reducing bacteria, Inhibitors, Phosphates-Tannins**

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### **IRON, Corrosion (Sulphuric acid) Inhibitors, Effect of halogen ions**

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**IRON, Determination, Copper.** See **COPPER, Determination of iron**

**IRON, Determination, Cupric salts.** See **CUPRIC SALTS, Determination of iron**

**IRON, Determination, Feedwater, Boilers, Power stations.** See **POWER STATIONS, Boilers, Feedwater, Determination of iron**

### **IRON, Determination, Gravimetry, Reagents, 2-Mercaptopyridine-N-oxide**

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### **IRON, Determination of oxygen, Isotope dilution**

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**IRON, Effect on alumina particle movement, Nickel-Alumina.** See **NICKEL-ALUMINA, Alumina particle movement, Effect of iron**

**IRON, Effect on growth, Quenched uranium, Fuels, Nuclear reactors.** See **NUCLEAR REACTORS, Fuels, Uranium, Quenched, Growth, Effect of iron**

**IRON, Electroplating, Single crystal platinum.** See **PLATINUM, Crystals, Single, Electroplating, Iron**

**IRON, Films.** See **FILMS, Iron**

**IRON, Foil.** See **FOIL, Iron**

**IRON, Foundry practice**

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**IRON, Grey, Casting, Moulds, Sand, Green, Hardness, Testing, Ridsdale-Dietert meters**

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**IRON, Grey, Casting, Risers**

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**IRON, Grey, Effect of tin**

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**IRON, Grey, Effect of uranium**

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**IRON, Grey, Low phosphorous, Effect of tin**

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**IRON, Grey, Machine tool components. See MACHINE TOOLS, Components, Iron, Grey****IRON, Grey, Pearlite, Effect of chromium**

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**IRON, Inclusions, Castings, High tensile brass. See BRASS, High tensile, Castings, Inclusions, Iron****IRON, Industry**

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**IRON, Ingots. See INGOTS, Iron****IRON, Liquid, Carburisation**

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**IRON, Liquid, Carburisation, Gas injection, Porous plugs**

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**IRON, Liquid, Dephosphorisation, Powder, Lancing**

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**IRON, Liquid, Sulphur removal, Cupolas, Slagging boxes**

Experience with continuous desulphurization in the production of iron for making light section castings. J. B. Logan & R. B. Coates. *Brit. Cast Iron Research Ass. J. (B.C.I.R.A. Journal)* 12 (Jan 64) p.48-53. il. refs.

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**IRON, Magnetic cores. See CORES, Magnetic, Iron****IRON, Malleable, Carbon equivalent, Determination, Thermal analysis**

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**IRON, Malleable, Effect of copper**

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**IRON, Malleable, Pearlitic, Annealing, Furnaces, Electric**

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**IRON, Mining, Forest of Dean**

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**IRON, Nitrogen desorption, Vacuum, Determination, Snoek damping method**

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**IRON, Nodular, Castings**

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**IRON, Nodular, Ferritic, Annealed, Mechanical properties**

Effect of carbon

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**IRON-NICKEL, Cast, Balls, Grinding, Clinker compounds, Cement. See CEMENT, Clinker compounds, Grinding, Balls, Iron-Nickel, Cast****IRON-NICKEL, Cast, Balls, Grinding, Nickel oxide, Powders. See POWDERS, Nickel oxide, Grinding, Balls, Iron-Nickel, Cast****IRON-NICKEL, Fatigue, Effect of crystal structure**

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See

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# **JORDAN RIVER**

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- KILNS**, Rotary, Lime. See **LIME**, Kilns, Rotary
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**LIGHT**

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- LIGHT-FASTNESS**, Reactive dyes, Dyed fabrics. See **FABRICS**, Dyed (Reactive dyes) Light fastness
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- LIGHTING**, Auditoriums. See **AUDITORIUMS**, Lighting
- LIGHTING**, Bridges. See **BRIDGES**, Lighting
- LIGHTING**, Building sites. See **BUILDING**, Sites, Lighting
- LIGHTING**, Cathedrals. See **CATHEDRALS**, Lighting
- LIGHTING**, Churches. See **CHURCHES**, Lighting
- LIGHTING**, Cinematography. See **CINEMATOGRAPHY**, Lighting
- LIGHTING**, Coal mining. See **COAL**, Mining, Lighting
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**LIGHTING, Ports, Handling, Petroleum.** See PETROLEUM, Handling, Ports, Lighting

**LIGHTING, Precincts, Flats.** See FLATS, Precincts, Lighting

**LIGHTING, Process photography.** See PROCESS PHOTOGRAPHY, Lighting

**LIGHTING, Projection, Transparent slides.** See SLIDES, Transparent, Projection, Lighting

**LIGHTING, Public libraries.** See LIBRARIES, Public, Lighting

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## LINARES

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## LINCOLN

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**LINE-SOLUTION**, Analysis, Plane stresses. See STRESSES, Plane, Analysis, Line-solution

**LINE-SOURCE LOUDSPEAKERS**. See LOUDSPEAKERS, Line-source

**LINEAR AMPLIFIERS**. See AMPLIFIERS, Linear

**LINEAR AMPLIFIERS**, Single sideband radio. See RADIO, Single sideband, Amplifiers, Linear

**LINEAR AMPLIFIERS**, Transmitters, H.F. radio. See RADIO, H.F., Transmitters, Amplifiers, Linear

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**LINEAR INDUCTION MOTORS**, Impact extrusion machines, Billets. See BILLETS, Extrusion, Impact, Machines, Electric motors, Induction, Linear

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**LINERS**, Calendering, Rubber, Sheets. See **SHEETS**, Rubber, Calendering, Liners

**LINERS**, Cylinders, Internal combustion engines. See **ENGINES** (Internal combustion) Cylinders, Liners

**LINERS**, Cylinders, Motor car engines. See **MOTOR CARS**, Engines, Cylinders, Liners

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**LININGS**, Bodies, Motor cars. See **MOTOR CARS**, Bodies, Linings

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**LININGS**, Tanks, Road vehicles, Transport, Warm meal, Groundnuts. See **GROUNDNUTS**, Meal, Warm, Transport, Tankers, Road, Tanks, Linings

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**LININGS**, Tunnels, Underground railways. See **RAILWAYS**, Underground, Tunnels, Linings

**LININGS**, Wind tunnels. See **WIND TUNNELS**, Linings

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**LIQUID**

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**LIQUID BATH THERMOSTATS.** See **THERMOSTATS**, Liquid bath

**LIQUID CARBON DIOXIDE**, Refrigerated commercial vehicles, Transport, Food. See **FOOD**, Transport, Commercial vehicles, Refrigerated, Carbon dioxide, Liquid

**LIQUID CRYSTALS**, Phospholipids. See **PHOSPHOLIPIDS**, Liquid crystals

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**LIQUID HYDROGEN-OXYGEN**, Fuels, Rockets. See

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- LIQUID NITROGEN**, Cryostats, X-ray diffraction. See **X-RAYS**, Diffraction, Cryostats, Liquid nitrogen
- LIQUID NITROGEN**, Fire prevention, Coal mining. See **COAL**, Mining, Fires, Prevention, Liquid nitrogen
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- LIQUID NITROGEN**, Refrigerated commercial vehicles, Transport, Food. See **FOOD**, Transport, Commercial vehicles, Refrigerated, Nitrogen, Liquid
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- LIQUID OXYGEN**, Respirators, Fire control. See **FIRES**, Control, Respirators, Oxygen, Liquid
- LIQUID PHASE AROMATISATION**, Terpenes, p-Cymene production. See **p-CYMENE**, Production, Terpenes, Aromatisation, Liquid phase
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- LIQUID PROPELLANTS**. See **PROPELLANTS**, Liquid
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- LIQUID URANIUM**, Fuels, Nuclear reactors. See **NUCLEAR REACTORS**, Fuels, Uranium, Liquid
- LIQUID-VAPOUR EQUILIBRIA**. See **VAPOUR-LIQUID EQUILIBRIA**
- LIQUID-VAPOUR EQUILIBRIA**, Azeotropes, Alkyl alcohols-Benzene. See **ALKYL ALCOHOLS-BENZENE**, Azeotropes, Vapour-liquid equilibria
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**LIVERPOOL**

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PORTS, Liverpool  
RAILWAYS, Liverpool-Manchester  
ROADS, Town planning, Liverpool  
TOWN PLANNING, Liverpool

**LIVERPOOL. COLLEGE OF TECHNOLOGY REGIONAL COLLEGE**

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**LOADING**

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**LOADING, Aerodynamic, Blades, Rotors, Helicopters.** See **HELICOPTERS, Rotors, Blades, Aerodynamic loading**

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**LOADING, China clay.** See **CHINA CLAY, Loading**

**LOADING, Coal.** See **COAL, Loading**

**LOADING, Commercial vehicles.** See **VEHICLES, Commercial, Loading**

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**BEER, Bottled, Transport, Commercial vehicles, Loading**

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**LOADING, Machine tools.** See **MACHINE TOOLS, Loading**

**LOADING, Machine tools, Gearbox components, Motor cars.**

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**LOADING, Petroleum, Road tankers.** See **TANKERS, Road, Petroleum, Loading**

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Properties  
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**LOW TEMPERATURE, Solubility, Beta-gamma transition studies, Sulphur.** See **SULPHUR, Beta-gamma transition, Studies, Solubility, Low temperature**

**LOW TEMPERATURE HYGROMETERS.** See **HYGROMETERS, Low temperature**

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- LUMINESCENCE, Diamonds, Semiconductors. See SEMI-CONDUCTORS, Diamonds, Luminescence
- LUMINESCENCE, Single crystals, Potassium chloride. See POTASSIUM CHLORIDE, Crystals, Single, Luminescence
- LUMINEX LUREX. See LUREX LUMINEX
- LUMINOUS DIALS, Watches. See WATCHES, Dials, Luminous
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- LYE PEELING, Fruit. See FRUIT, Peeling, Lye
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- M.G. TD CARS. See MOTOR CARS, Types, M.G. TD
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AUTOMATICS, Machine tools  
BORING  
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BROACHING, Machines  
CARBIDES, Sintered  
CHAMFERING  
CHUCKS  
CLAMPING  
CLAMPS  
DRAWING  
DRILLING, Machines  
DRILLS  
FIXTURES, Machine tools  
FLOW PEELING  
GRINDING  
HOBBING, Machines  
JIGS  
MACHINING



## MACHINE TOOLS

Related Headings—cont.

MANDRELS  
MILLINGPIERCING  
PLANING  
PRESS TOOLS  
PRESSES, Hydraulic  
PRESSES, Power  
PRESSES, Transfer  
PRESSWORKING  
PROFILING  
PUNCHING

ROUTING

SLOTING  
STAMPING  
SWAGINGTABLES, Rotary  
TOOLS, Diamond  
TRANSFER MACHINES  
TURNING

## MACHINE TOOLS—SUBHEADINGS—Synopsis

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

## History

Particular localities  
*India*

## Research

## Standardisation

Problems  
*Vibration*Safety  
*Guards*Properties  
*Accuracy*  
*Quality criteria*  
*Colour*

## Technical activities

*Design*  
*Industrial design*  
*Manufactures*  
*Maintenance*  
*Painting*  
*Replacement*  
  
*Operation*  
*Alignment*  
*Loading*  
*Lubrication*  
*Lubricating oils*

## Components

*Leadscrews*  
*Bearings*  
*Cutters*  
*Toolholders*  
*Unit heads*  
*Multi-spindle heads*

## MACHINE TOOLS—SUBHEADINGS—Synopsis—cont.

*Beds*  
*Slideways*  
*Feed units*  
*Electric motors*  
*Hydraulic systems*  
*Pneumatic equipment*  
*Control systems*  
*Positioning control*  
*Digital followers*  
*Instruments**Utilisation*

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Manufactures, Machine tools

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#### MAGNETIC MATERIALS

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FERRIMAGNETIC MATERIALS

FERRITES

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MAGNETIC PROPERTIES, Intermetallic compounds, Iron-Germanium. See IRON-GERMANIUM, Intermetallic compounds, Magnetic properties

MAGNETIC PROPERTIES, Iron-Nickel. See IRON-NICKEL, Magnetic properties

MAGNETIC-PULSE FORMING, Copper, Rings, Seals, Ball joints, Steering assemblies, Motor cars. See MOTOR CARS, Steering systems, Ball joints, Seals, Rings, Copper, Forming, Magnetic-pulse

MAGNETIC-PULSE FORMING, Jointing, Metal, Tubes. See TUBES, Metal, Jointing, Magnetic-pulse forming

MAGNETIC-PULSE FORMING, Metals. See METALS, Forming, Magnetic-pulse

MAGNETIC REED SWITCHES. See SWITCHES, Magnetic reed

MAGNETIC REED SWITCHES, Telephony. See TELEPHONY, Switches, Magnetic reed

MAGNETIC SEPARATION, Mineral dressing. See MINERAL DRESSING, Separation, Magnetic

MAGNETIC SHEETS. See SHEETS, Magnetic

MAGNETIC STORAGE UNITS. See STORAGE UNITS, Magnetic

MAGNETIC STORAGE UNITS, Computers. See COMPUTERS, Storage units, Magnetic

#### MAGNETIC SUSCEPTIBILITY

Related Headings:

HAAS-VAN ALPHEN EFFECT

MAGNETIC SUSCEPTIBILITY, Thorium carbides. See THORIUM CARBIDES, Magnetic susceptibility

MAGNETIC SUSCEPTIBILITY, Uranium carbides. See URANIUM CARBIDES, Magnetic susceptibility

MAGNETIC SUSCEPTIBILITY, Vanadium co-ordination

studies, Alkali borate glass. See GLASS, Alkali borate, Vanadium co-ordination, Studies, Magnetic susceptibility

MAGNETIC SUSCEPTIBILITY, Vanadium co-ordination studies, Aluminium borophosphate glass. See GLASS, Aluminium borophosphate, Vanadium co-ordination, Studies, Magnetic susceptibility

MAGNETIC TAPE. See TAPE, Magnetic

MAGNETIC TAPE, Data logging, Radar, Tracking, Missiles. See MISSILES, Tracking, Radar, Data logging, Magnetic tape

MAGNETIC TAPE, Data storage. See DATA STORAGE, Magnetic tape

MAGNETIC TAPE, Flight recorders. See FLIGHT RECORDERS, Tape, Magnetic

MAGNETIC TAPE, Frequency discrimination. See FREQUENCY, Discrimination, Magnetic tape

MAGNETIC TAPE, Recording, Instruments. See INSTRUMENTS, Recording, Magnetic tape

MAGNETIC TAPE, Storage, Programs, Computers. See COMPUTERS, Programs, Storage, Magnetic tape



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 MAGNETIC WHEELS, Engines. See ENGINES, Magnetic wheels  
 MAGNETISATION, Nickel ferrites. See NICKEL FERRITES, Magnetisation  
 MAGNETISATION, Reversal, Inclusions, Uniaxial magnetic materials. See MAGNETIC MATERIALS, Uniaxial, Inclusions, Magnetisation reversal  
 MAGNETISATION, Reversal, Vacuum deposited permalloys, Films. See FILMS, Permalloys, Vacuum deposited, Magnetisation reversal

### MAGNETISM

Related Headings:

DE-MAGNETISING  
 FERROMAGNETISM  
 GALVANOMAGNETISM  
 THERMOMAGNETISM

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**MAKING-UP, Fabrics, Sweaters.** See **SWEATERS, Fabrics, Making-up**

**MAKING-UP, Knitted elastic nylon trews.** See **TREWS, Nylon, Elastic, Knitted, Making-up**

**MAKING-UP, Knitted pyjamas.** See **PYJAMAS, Knitted, Making-up**

**MAKING-UP, Knitwear.** See **KNITWEAR, Making-up**

**MAKING-UP, Man-made fibres, Fabrics.** See **FABRICS, Man-made fibres, Making-up**

**MAKING-UP, Man-made fibres, Fabrics, Clothing.** See **CLOTHING, Fabrics, Man-made fibres, Making-up**

**MAKING-UP, Man-made fibres, Knitwear fabrics.** See **KNITWEAR, Fabrics, Man-made fibres, Making-up**

**MAKING-UP, Nylon fabrics, Clothing.** See **CLOTHING, Fabrics, Nylon, Making-up**

**MALADJUSTED CHILDREN, Houses.** See **HOUSES (Maladjusted children)**

**MALATHION, Insecticides, Contamination, Animal feeding-stuffs.** See **ANIMAL FEEDINGSTUFFS, Contamination, Malathion**

**MALATHION, Insecticides, Grain.** See **GRAIN, Insecticides, Malathion**

**MALATHION, Insecticides, Oilseeds.** See **OILSEEDS, Insecticides, Malathion**

**MALATHION, Insecticides, Pimento.** See **PIMENTO, Insecticides, Malathion**

**MALATHION, Insecticides, Rice bran.** See **RICE, Bran, Insecticides, Malathion**

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**MALMO FLYINDUSTRI VIPAN LIGHT AIRCRAFT.** See

**AIRCRAFT, Light, Types, Malmö Flygindustri Vipan**

**MALONIC ACID, Derivates, Reaction with dimethyl acetylenedicarboxylate.** See **DIMETHYL ACETYLENE-DICARBOXYLATE, Reaction with malonic acid derivatives**

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**MAN-MADE FIBRES**

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**ACRYLIC FIBRES**

**CELLULOSE TRIACETATE, Fibres**

**CRIMPLENE**

**DACRON**

**NYLON, Fibres**

**NYLON 6, Fibres**

**NYLON 66, FIBRES**

**POLYAMIDES, Fibres**

**POLYESTER FIBRES**

**POLYPROPYLENE, Fibres**

**POLYURETHANE, Fibres**

**POLYVINYL ALCOHOL, Copolymers, Graft, Fibres**

**POLYVINYL ALCOHOL, Fibres**

**POLY-m-XYLYLENE ADIPAMIDE**

**RAYON**

**TERYLENE**

**TRICEL**



**MAN-MADE FIBRES—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

Properties  
Structure  
Viscoelasticity  
Technical activities  
Manufactures  
Finishing  
Dyeing  
Dyes  
Types of man-made fibres  
Strained

**MAN-MADE FIBRES, Carpets.** See **CARPETS, Man-made fibres**

**MAN-MADE FIBRES, Container materials.** See **CONTAINERS, Fabric, Nylon**

**MAN-MADE FIBRES, Dyeing**

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**MAN-MADE FIBRES, Fabrics.** See **FABRICS, "Split fibre"**

**MAN-MADE FIBRES, Fabrics, Clothing.** See **CLOTHING, Fabrics, Man-made fibres**

**MAN-MADE FIBRES, Fabrics, Industrial clothing.** See **CLOTHING, Industrial, Fabrics, Man-made fibres**

**MAN-MADE FIBRES, Fabrics, Knitwear.** See **KNITWEAR, Fabrics, Man-made fibres**

**MAN-MADE FIBRES, Fabrics, Papermaking machines.** See **PAPERMAKING, Machines, Fabrics, Man-made fibres**

**MAN-MADE FIBRES, Filters.** See **FILTERS, Man-made fibres**

**MAN-MADE FIBRES, Filters, Ceramics manufactures.** See **CERAMICS, Manufactures, Filters, Man-made fibres**

**MAN-MADE FIBRES, Finishing**

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**MAN-MADE FIBRES, Knitting yarns.** See **KNITTING, Yarns, Man-made fibres**

**MAN-MADE FIBRES, Linings, Clothing.** See **CLOTHING, Linings, Man-made fibres**

**MAN-MADE FIBRES, Linings, Outerwear.** See **OUTERWEAR, Linings, Man-made fibres**

**MAN-MADE FIBRES, Manufactures, Chemicals, Auxiliary**  
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**MAN-MADE FIBRES, Safety belts, Motor cars.** See **MOTOR CARS, Safety belts, Man-made fibres**

**MAN-MADE FIBRES, Strained, Transverse lines**

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**MANAGEMENT**

Related Headings:

CLASSIFICATION

PRODUCTION, Management

**MANAGEMENT EDUCATION, Building.** See **BUILDING, Education (Management)**

**MANAGEMENT EDUCATION, Engineering.** See **ENGINEERING, Education (Management)**

**MANAGEMENT EDUCATION, Printing.** See **PRINTING, Education (Management)**

**MANCHESTER**

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BUSES, Transport, Buxton - Manchester

PARCELS, Transport, Manchester

PRINTING, Manchester

RAILWAYS, Liverpool-Manchester

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MANGANESE-COPPER-LEAD, Aluminosilicate glaze. See GLAZES, Aluminosilicate, Copper-Lead-Manganese

MANGANESE DIOXIDE, Black. See PYROLUSITE

MANGANESE DIOXIDE, Collectors, Bismuth solutions, Antimony precipitation. See ANTIMONY, Precipitation (Bismuth solutions) Collectors, Manganese dioxide

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**SEA**

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**MASS TRANSFER**, Cylinders. See **CYLINDERS**, Mass transfer

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**HARVARD UNIVERSITY****TELESCOPES**, Radio, Tyngsboro

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See ZINC, Mining, Mattagami

**MATRESSES, Concrete, Banks, Rivers. See RIVERS, Banks, Mattresses, Concrete****MAULE M-4 LIGHT AIRCRAFT. See AIRCRAFT (Light) Types, Maule M-4****MAURITANIA**

See

IRON, Ores, Transport, Railways, Mauritania

PORTS, Port Etienne

**MAXIMUM DEMAND MONITORS, Electrical installations.**

See ELECTRICAL INSTALLATIONS, Maximum demand monitors

**MAXIMUM DEMAND MONITORS, Induction furnaces, Melting, Steel. See STEEL, Melting, Furnaces, Induction, Maximum demand monitors**

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EXCAVATORS  
FORK TRUCKS  
GANTRIES  
HOISTING EQUIPMENT  
LIFT TRUCKS  
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Wheels, Heat treatment, Handling

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MECHANICAL HANDLING, Warehouses, Drugs. See DRUGS, Warehouses, Mechanical handling

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#### MECHANICS

##### Related Headings:

FORCE

STATICS

MECHANICS, Universities, Engineering education. See ENGINEERING, Education, Universities, Mechanics

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Machines, Castings, Meehanite

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**MELITUS ALBA.** See SWEET CLOVER**MELODIC ELECTRONIC MUSICAL INSTRUMENTS.** See

MUSICAL INSTRUMENTS, Electronic, Melodic

**MELT SPINNING, Fibres, Nylon 66.** See NYLON 66,

Fibres, Melt spinning

**MELTING**

Related Headings:

ELECTRON BEAM MELTING

RE-MELTING

**MELTING, Aluminium.** See ALUMINIUM, Melting**MELTING, Aluminium, Films.** See FILMS, Aluminium,

Melting

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Investment, Melting, Induction

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Melting

**MELTING, Iron wires.** See WIRES, Iron, Melting**MELTING, Potassium.** See POTASSIUM, Melting**MELTING, Pressure die casting.** See DIE CASTING,

Pressure, Melting

**MELTING, Refractory metals.** See METALS, Refractory,

Melting

**MELTING, Stainless steel.** See STEEL, Stainless, Melting**MELTING, Steel.** See STEEL, Melting**MELTING, Swarf, Cast iron.** See IRON, Cast, Swarf, Melting**MELTING, Vacuum**

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See

PRODUCTION ENGINEERING RESEARCH ASSOCIATION

**MEMBRANE ANALOGY, Torsion.** See TORSION, Membrane analogy

**MEMBRANE PACKS, Electrodialysis, Saline water.** See WATER, Saline, Electrodialysis, Membrane packs

**MEMBRANE STRESSES, Hyperbolic cooling towers.** See COOLING, Towers, Hyperbolic, Membrane stresses

**MEMBRANE STRESSES, Tensile, Rectangular reinforced concrete slabs.** See SLABS, Concrete, Reinforced, Rectangular, Tensile membrane stresses

**MEMBRANES, Cellulose acetate, Reverse osmosis, Saline water conversion.** See WATER, Saline, Conversion, Reverse osmosis, Membranes, Cellulose acetate

**MEMBRANES, Cellulose acetate, Reverse osmosis, Separation, Liquid hydrocarbon mixtures.** See HYDROCARBONS, Liquid, Mixtures, Separation, Reverse osmosis, Membranes, Cellulose acetate

**MEMBRANES, Electrodialysis.** See ELECTRODIALYSIS, Membranes

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**MEMORY DEVICES.** See STORAGE UNITS

**MEMPHIS**

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AIRPORTS, Terminal buildings, Memphis

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**8-MERCAPTOQUINOLINE, Reagents, Gravimetry, Nickel determination.** See NICKEL, Determination, Gravimetry, Reagents, 8-Mercaptoquinoline

**8-MERCAPTOQUINOLINE, Reagents, Gravimetry, Palladium determination.** See PALLADIUM, Determination, Gravimetry, Reagents, 8-Mercaptoquinoline

**MERCEDES-BENZ 230SL AUTOMATIC CARS.** See MOTOR CARS, Types, Mercedes-Benz 230SL Automatic

**MERCEDES-BENZ 230SL CARS.** See MOTOR CARS, Types, Mercedes-Benz 230SL

**MERCEDES-BENZ 300 SE L.W.B. AUTOMATIC CARS.** See MOTOR CARS, Types, Mercedes-Benz 300 SE l.w.b. Automatic

**MERCEDES-BENZ L1113 LORRIES.** See LORRIES, Types, Mercedes-Benz L1113

**MERCEDES-BENZ LP 1620-DOLL LORRY-TRAILER COMBINATIONS.** See LORRY-TRAILER COMBINATIONS, Types, Mercedes-Benz LP 1620-Doll

**MERCEDES-BENZ LPS 1620/30-SCHENK SA 16 100 ARTICULATED VEHICLES.** See MOTOR VEHICLES, Articulated, Types, Mercedes-Benz LPS 1620/30-Schenk SA 16 100

**MERCEDES MONZA RACING CARS.** See MOTOR CARS (Racing) Types, Mercedes Monza

**MERCERISED POPLIN, Colour television testing.** See TELEVISION, Colour, Testing, Poplin, Mercerised

**MERCURIC ACID, Ascorbic acid determination, Blackcurrants.** See BLACKCURRANTS, Determination of ascorbic acid, Mercuric acid

**MERCURY, Alloys**

Related Headings:

AMALGAM

**MERCURY, Brittle fracture, Zinc.** See ZINC, Fracture, Brittle, Mercury

**MERCURY, Bulbs, Activation, Supercooled water.** See WATER, Supercooled, Mercury bulb activated

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**MERCURY, Electrodes, Electrolysis, Brine, Chlorine production.** See CHLORINE, Production, Brine, Electrolysis, Electrodes, Mercury

**MERCURY, Nucleation, Oxide layer dissolution studies, Nitric acid solutions, Spherical single crystal platinum cathodes.** See CATHODES, Platinum, Single crystal, Spherical, Nitric acid solutions, Oxide layer dissolution, Studies, Mercury nucleation

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**MERCURY ARC RECTIFIERS.** See RECTIFIERS, Mercury arc

**MERCURY ARC RECTIFIERS, Electric locomotives.** See LOCOMOTIVES, Electric, Rectifiers, Mercury arc

**MERCURY ARC RECTIFIERS, High voltage d.c. power transmission.** See POWER TRANSMISSION, D.C., High voltage, Rectifiers, Mercury arc

**MERCURY ARC RECTIFIERS, Power supplies, Transmitters, Radio communications.** See RADIO, Communications, Transmitters, Power supplies, Rectifiers, Mercury arc

**MERCURY BULB FLUORESCENT LAMPS.** See LAMPS, Fluorescent, Mercury bulb

MERCURY—CAESIUM, Thermionic diodes, Power generators.

See DIODES, Thermionic, Power generators, Caesium—Mercury

MERCURY COOLED NUCLEAR REACTORS. See NUCLEAR REACTORS, Mercury cooled

MERCURY—FILLED GAUGES, Measurement, Settlement, Foundations, Embankments. See EMBANKMENTS, Foundations, Settlement, Measurement, Gauges, Mercury—filled

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MERCURY VAPOUR GAS DISCHARGE TUBES. See ELECTRON TUBES, Gas discharge, Mercury vapour

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HYDROMETALLURGY

IRON, Production

METALLOGRAPHY

SMEETING

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# METALS

## Related Headings:

ALKALI METALS  
ALLOYS  
ALUMINIUM  
ANTIMONY  
BERYLLIUM  
BISMUTH  
CADMIUM  
CAESIUM  
CALCIUM  
CERIUM  
CHROMIUM  
COBALT  
COPPER  
FERRO-ALLOYING METALS  
GADOLINIUM  
GALLIUM  
GERMANIUM  
GOLD  
HAFNIUM  
INDIUM  
IRIDIUM  
IRON  
LEAD  
LITHIUM  
MAGNESIUM  
MANGANESE  
MERCURY  
MOLYBDENUM  
NEODYMIUM  
NEPTUNIUM  
NICKEL  
NIOBIUM  
NON-FERROUS METALS  
ORES  
PALLADIUM  
PLATINUM  
PLATINUM METALS  
PLUTONIUM  
POLONIUM  
POTASSIUM

# METALS

## Related Headings—cont.

PRECIOUS METALS  
PROTACTINIUM  
RARE EARTHS  
RHODIUM  
RUBIDIUM  
RUTHENIUM  
SAMARIUM  
SELENIUM  
SILVER  
SODIUM  
STRONTIUM  
TANTALUM  
TELLURIUM  
THALLIUM  
THORIUM  
TIN  
TITANIUM  
TRANSITION METALS  
TUNGSTEN  
URANIUM  
VANADIUM  
YTTRIUM  
ZINC  
ZIRCONIUM

# METALS—SUBHEADINGS—Synopsis

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

## Physical & chemical aspects

*Electronic structure*  
*Effect of silicon*  
*Mechanical properties*  
    *Strength*  
    *Yield strength*  
    *Hardness*  
    *Creep*  
    *Fatigue*  
    *Abrasion*  
    *Fracture*  
*Thermal properties*  
    *Specific heat*  
*Cryogenics*  
*Electrical properties*  
    *Electrical resistivity*  
*X-ray properties*  
    *X-ray absorption*  
    *X-ray diffraction*  
*Crystals*  
*Chemistry*  
    *Oxidation*  
    *Ion adsorption*  
    *Impurities*  
    *Analysis*  
        *Determination of...*  
    *Solvent extraction*

## Technical activities

*Mining*  
*Production*  
*Manufactures*  
    *Forming*  
        *Extrusion*  
        *Electroforming*  
    *Spinning*  
    *Bonding*  
    *Fastening*  
    *Hardening*

**METALS—SUBHEADINGS—Synopsis—cont.**

- Hardenability
- Ageing
- Finishing
  - Cleaning
  - Polishing
  - Coating
    - Blackening
    - Painting
      - Paint
    - Dipping
    - Spraying
  - Printing
  - Storage
- States and types of metals
  - Liquid
  - Cubic
    - Face centred cubic
  - Extruded
  - Composite
  - Reinforced
  - Refractory
- Products
  - Scrap
- Metals for particular purposes
  - (Welding)
  - Building materials

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**METALS, Agricultural equipment.** See **AGRICULTURAL EQUIPMENT, Metals**

**METALS, Bars.** See **BARS, Metal**

**METALS, Bellows.** See **BELLOWS, Metal**

**METALS, Bellows, Joints, Pipes.** See **PIPES, Joints, Bellows, Metal**

**METALS, Blackening**

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**METALS, Chemical engineering plant.** See **CHEMICAL ENGINEERING, Plant, Metals**

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**METALS, Coating, Polythene**

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**METALS, Coating, Powders, Plastics**

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HEAT, Treatment  
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MACHINING  
MELTING  
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# MICROBIOLOGY

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BACTERIOLOGY  
FERMENTATION  
FUNGICIDAL  
PATHOGENS  
PROTOZOA  
STERILISATION  
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Related Headings:

SUB-MILLIMETRE WAVE FREQUENCY

**MILLINERY**

Related Headings:

HATS

**MILLING, Blades, Steam turbines. See STEAM, Turbines, Blades, Milling**

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**MILLING, Steel, Frames, Tracks, Tractor shovels. See TRACTOR SHOVELS, Tracks, Frames, Steel, Milling**

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- MILLS, Cold rolling, Metal, Strips. See STRIPS, Metal, Rolling, Cold, Mills
- MILLS, Cold rolling, Steel strips. See STRIPS, Steel, Rolling, Cold, Mills
- MILLS, Dispersion, Pigments, Paint. See PAINT, Pigments, Dispersion, Mills
- MILLS, Flour. See FLOUR, Mills
- MILLS, Grinding, Powders. See POWDERS, Grinding, Mills
- MILLS, Hot rolling, Steel. See STEEL, Rolling, Hot, Mills
- MILLS, Hot rolling, Steel, Rings. See RINGS, Steel, Rolling, Hot, Mills
- MILLS, Pendulum, Rolling, Metal strips. See STRIPS, Metal, Rolling, Mills, Pendulum
- MILLS, Rolling. See ROLLING, Mills
- MILLS, Rolling, Aluminium. See ALUMINIUM, Rolling, Mills
- MILLS, Rolling, Brass, Strips. See STRIPS, Brass, Rolling, Mills
- MILLS, Rolling, Copper, Strips. See STRIPS, Copper, Rolling, Mills
- MILLS, Rolling, Grain, Animal feedingsuffs. See GRAIN, Animal feedingsuffs, Rolling, Mills
- MILLS, Rolling, Metal sheets. See SHEETS, Metals, Rolling, Mills
- MILLS, Rolling, Precast concrete, Panels. See PANELS, Concrete, Precast, Rolling, Mills
- MILLS, Rolling, Steel. See STEEL, Rolling, Mills
- MILLS, Rolling, Steel, Bars. See BARS, Steel, Rolling, Mills
- MILLS, Rolling, Steel, Beams. See BEAMS, Steel, Rolling, Mills
- MILLS, Rolling, Steel, Billets. See BILLETS, Steel, Rolling, Mills
- MILLS, Rolling, Steel, Ingots. See INGOTS, Steel, Rolling, Mills
- MILLS, Rolling, Steel, Plates. See PLATES, Steel, Rolling, Mills
- MILLS, Rolling, Steel, Rods. See RODS, Steel, Rolling, Mills
- MILLS, Rolling, Steel, Sections. See SECTIONS, Steel, Rolling, Mills
- MILLS, Rolling, Steel, Slabs. See SLABS, Steel, Rolling, Mills
- MILLS, Rolling, Steel, Strips. See STRIPS, Steel, Rolling, Mills
- MILLS, Rolling, Steel alloys, Bars. See BARS, Steel alloys, Rolling, Mills
- MILLS, Rolling, Steel alloys, Rods. See RODS, Steel alloys, Rolling, Mills
- MILLS, Slate. See SLATE, Mills
- MILLS, Steel manufactures. See STEEL, Mills
- MILLS-PACKARD CHAMBERS, Sulphuric acid production. See SULPHURIC ACID, Production, Mills-Packard chambers
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- Effect of variable adjustments on separation in the Jones magnetic separator. W. J. D. Stone. Mine & Quarry Engng., 30 (May 64) p.202-11. il. refs.

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##### **RADIO, Stations, Cables, Mineral insulated**

#### **MINERAL OILS, Determination, Fatliquors. See FAT-**

##### **LIQUORS, Determination of mineral oils**

#### **MINERALISERS, Calcination, Cement. See CEMENT, Calcination, Mineralisers**

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#### **MINERALS, Coal. See COAL, Minerals**

#### **MINERALS, Identification**

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**MINIATURE CAMERAS.** See **CAMERAS, Miniature**

**MINIATURE CAMERAS, Photogrammetry.** See **PHOTOGRAMMETRY, Cameras, Miniature**

**MINIMUM REFLUX RATIO, Ternary mixtures, Fractional distillation.** See **DISTILLATION, Fractional, Ternary mixtures, Minimum reflux ratios**

**MINING**

Related Headings:

BLASTING  
BOREHOLES  
MINERAL DRESSING  
MINES  
OFF SHORE DRILLING  
PIT-PROPS  
PROSPECTING  
QUARRYING  
ROCK, Drills

**MINING-SUBHEADINGS-Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

Particular localities

Great Britain

Africa

South Africa

Underdeveloped countries

Education

Research

Problems

Safety

Rockbursts

Equipment

Electrical equipment

Amplifiers

Machinery

Instruments

Psychrometers

**MINING-SUBHEADINGS-Synopsis-cont.**

Technical activities

Surveying

Engineering

Blasting

Explosives

Hoisting

Winding

Transport

Conveyors

Lighting

Ventilation

Shafts

Types of mines

Opencast

**MINING, Amplifiers, Magnetic**

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**MINING, Asphalt.** See **ASPHALT, Mining**

**MINING, Blasting, Production, Control, Statistical methods**

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**MINING, Brown coal.** See **COAL, Brown, Mining**

**MINING, Calcite.** See **CALCITE, Mining**

**MINING, Coal.** See **COAL, Mining**

**MINING, Conveyors, Belt**

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**MINING, Copper.** See **COPPER, Mining**

**MINING, Diamonds.** See **DIAMONDS, Mining**

**MINING, Education, Universities**

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**MINING, Fluorspar.** See **FLUORSPAR, Mining**

**MINING, Galena.** See **GALENA, Mining**

**MINING, Gold.** See **GOLD, Mining**

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- Some aspects of wire rope choice and design. P. Rajan. *Wire Industry*, 31 (Aug 64) p.779-83. il. refs.

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**MOLYBDENUM-STEEL-CHROMIUM, Pipes, Steam.** See **STEAM, Pipes, Steel-Chromium-Molybdenum**

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**MONITORS, Radioactivity, Fingers.** See **FINGERS, Radio-activity, Monitors**

**MONITORS, X-ray doses, Fingers.** See **FINGERS, X-ray doses, Monitors**

**MONMOUTHSHIRE**

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**MOTORWAYS, Monmouthshire**

**MONOCHLORO-s-TRIAZINE, Dyeing, Cellulosic fabrics.**

See **FABRICS, Cellulosic, Dyeing, Monochloro-s-triazine**

**MONOCHROMATISATION, Compton scattering.** See **COMPTON SCATTERING, Monochromatization**

**MONOETHANOLAMINE.** See **ETHANOLAMINE**

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**MONTGOMERYSHIRE**

See

**LIBRARIES, County, Montgomeryshire**

**MONTMORILLONITE, Adsorption, Phenol.** See **PHENOL, Adsorption, Montmorillonite**

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#### MOTOR CARS—SUBHEADINGS—Synopsis

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

*Buyers' guides*

*History  
Research*



## MOTOR CARS—SUBHEADINGS—Synopsis—cont.

## Problems

- Noise
- Safety
- Skidding
- Aquaplaning
- Traffic engineering
- Theft prevention
- Vibrations

## Technical activities

- Design
  - Drawings
- Manufactures
  - Assembly
- Conversion
- Tests
  - Road tests
- Maintenance

## Operation

- Driving
- Drivers

## Parts

- Structures
- Suspensions
  - Shock absorbers
  - Springs
- Transmissions
  - Gearboxes
  - Gears
  - Layshafts
  - Clutches
  - Rear axles
- Steering systems
  - Wishbones
  - Steering wheels

## Brakes

## Wheels

- Tyres

## Axles

## Bodies

- Base units
- Underbodies
- Trim
- Interior fittings
- Seats
- Racks
- Roofs
- Windows
- Windscreens

## Engines

- Gas turbines

## Carburettors

## Radiators

## Silencers

## Electrical equipment

- Generators
- Fuel cells
- Starters
- Lamps

- Headlights

## Electronic equipment

## Mirrors

## Instruments

## Heaters

## Ventilation

## Accessories

- Radio receivers
- Safety belts
- Fire extinguishers
- Bumpers

## MOTOR CARS—SUBHEADINGS—Synopsis—cont.

## Performance

- Speed
- Acceleration
- Fuel consumption

## Types

- Open-top
- Three wheeler
- Electric
- Steam
- Racing
- Experimental
- Dragster

## Ancillaries

- Ferries
- Trailers

## MOTOR CARS, Acceleration, Estimation

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*Automotive Body Engng.*, 134 (Jul 64) p.22-5. il.

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Combined spraying and stoving booth for car refinishing [Engtime Pegasus] *Product Finishing*, 17 (Feb 64) p.80-1. il.

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Made to measure transfer line uses off-the-peg machines [Vauxhall, Ellesmere Port] P. J. Varley. *Metalworking Production*, 108 (23 Sep 64) p.90-1. il.

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Sidelamps or dipped headlamps? R. C. Chaumuffin. *Autocar*, 120 (24 Jan 64) p.169-70. il.

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Car trim better finished in special plant [Coventry Radiator & Presswork Co.] *Engineering*, 197 (10 Jan 64) p.55. il.

Europe's first fully automatic electro-brightening and

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Progress towards automatic foundries and finishing plants [Associated Engineering Group] *Control*, 8 (Jan 64) p.47-8. il.

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American car makers exploit NC die milling. *Metalworking Production*, 108 (22 Jul 64) p.31-2. il.

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Great two-stroke fallacy. E. Tragatsch. Motor (29 Jul 64) p.116-17. il.

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In the workshop [Team Lotus] P. Garnier. Autocar, 120 (5 Jun 64) p.1080-1B. il.

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#### **MOTOR CARS (Racing) Types, Miller**

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Room at the top. Motor (15 Jul 64) p.110-11. il.

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Electrostatic powder spraying of car roof racks. Product Finishing, 17 (May 64) p.115-16. il.

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Quantity production of motor car fan and water pump spindle bearings [Pollard Bearings Ltd] A. W. Astrop. Machinery, 105 (18 Nov 64) p.1202-5. il.

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Fluid bed on stream: dyeing car safety belts firm and fast [Dykon] A. S. Roberts. Man-Made Textiles, 41 (Dec 64) p.42-6. il.

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High speed production of tubular seats [Cox of Watford Ltd.] Welding & Metal Fabrication, 32 (Jul 64) p.248-56. il.

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Stafford high-production shape-cutting installation. A. W. Astrop. Machinery, 105 (16 Sep 64) p.676-80. il.

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Dutch firm thrives on shock treatment [Koni] P. Evans. Industrial Diamond Rev., 24 (Aug 64) p.200-2. il.

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**MOTOR CARS, Types, Hillman Imp, Conversions**

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**MOTOR CARS, Types, Hillman Super Minx 2**

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**MOTOR CARS, Types, Hillman Super Minx 2 Convertible, Road tests**

Autocar road test 1961: Hillman Super Minx Series II Convertible 1,592 c.c. Autocar, 120 (14 Feb 64) p.296-300. il.

**MOTOR CARS, Types, Hillman Super Minx 3, Road tests**

Autocar road test 2003: Hillman Super Minx Series III 1,592 c.c. Autocar, 121 (27 Nov 64) p.1114-18. il.

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Luxury HUMBERS: 1965 models. Autocar, 121 (23 Oct 64) p.835-7. il.

Now a super Super Snipe: six cylinder Imperial joins improved Humber range. Motor (21 Oct 64) p.125-7. il.

**MOTOR CARS, Types, Humber Hawk 3, Road tests**

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**MOTOR CARS, Types, Identification, Paint flakes**

Identifying a car by its paint flakes. C. F. Tippet. Paint Technology, 28 (Apr 64) p.30-2

**MOTOR CARS, Types, ISO Rivolta IR-340, Road tests**

Autocar road test 1983: ISO Rivolta IR-340 5,359 c.c.

Autocar, 121 (17 Jul 64) p.120-4. il.

**MOTOR CARS, Types, Jaguar**

Breeding for speed and safety. R. Bell. Motor (8 Jul 64) p.30-1. il.

**MOTOR CARS, Types, Jaguar 2.4**

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**MOTOR CARS, Types, Jaguar 3.4**

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**MOTOR CARS, Types, Jaguar E-type 4.2 litres**

4.2 litres for Jaguar Mk.10 and E-type. Autocar, 121

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Smoother Jaguars. Motor (14 Oct 64) p.62-4. il.

**MOTOR CARS, Types, Jaguar E-type 4.2 litres, Road tests**

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**MOTOR CARS, Types, Jaguar Mk.10 4.2 litres**

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Autocar road test 1996: Jaguar 4.2-litre Mark 10 automatic 4,235 c.c. Autocar, 121 (16 Oct 64) p.759-63. il.

**MOTOR CARS, Types, Jaguar S-type, Road tests**

Jaguar S-type 3.8 Automatic. Motor (2 Dec 64) p.16-21. il.

**MOTOR CARS, Types, Jowett Javelin**

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Lancia Flavia Coupé. Motor (3 Jun 64) p.44-8. il.

**MOTOR CARS, Types, Lancia Fulvia, Road tests**

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**MOTOR CARS, Types, Lancia Fulvia 2C, Road tests**

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My goodness my M.G.: 12,000 mile-report. P. A. Turner. Motor (25 Mar 64) p.19-23. il.

**MOTOR CARS, Types, M.G. MGA 1600 mk.2**

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**MOTOR CARS, Types, M.G. Midget Mark 2**

Austin Healey Sprite Mk.III and M.G. Midget Mk.II.

Autocar, 120 (13 Mar 64) p.462-4. il.

**MOTOR CARS, Types, M.G. Midget Mark 2, Road tests**

M.G. Midget Mk II. Motor (13 May 64) p.24-8. il.

**MOTOR CARS, Types, M.G. TD**

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**MOTOR CARS, Types, M.G. TF**

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- MOTOR CARS, Types, Mercedes-Benz 230SL, Road tests**  
Autocar road test 1990: Mercedes-Benz 230SL 2,306 c.c. Autocar, 121 (4 Sep 64) p.456-60. il.
- MOTOR CARS, Types, Mercedes-Benz 230SL Automatic, Road tests**  
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- MOTOR CARS, Types, Mercedes-Benz 300 SE l.w.b. Automatic, Road tests**  
Autocar road test 1998: Mercedes-Benz 300SE l.w.b. Automatic 2,996 c.c. Autocar, 121 (30 Oct 64) p.918-22. il.
- MOTOR CARS, Types, Morris Mini-Cooper S 1275 c.c., Road tests**  
Autocar road test 1987: Morris Mini-Cooper 1275 S 1,275 c.c. Autocar, 121 (14 Aug 64) p.314-17. il.  
1275 S Mini Cooper. Motor (2 Sep 64) p.18-20. il.
- MOTOR CARS, Types, Morris Minor**  
Morris Minor: spot check. Motor (15 Apr 64) p.98-9. il.
- MOTOR CARS, Types, Morris Minor 1000 de luxe, Road tests**  
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- MOTOR CARS, Types, N.S.U.**  
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- MOTOR CARS, Types, N.S.U. Spider Wankel**  
Wankel on the warpath. J. Sloniger. Motor (23 Sep 64) p.30-1. il.
- MOTOR CARS, Types, N.S.U. Sport Prinz**  
NSU Prinz: so much from two cylinders. Engineering, 197 (14 Feb 64) p.250-1. il.
- MOTOR CARS, Types, Napier 40/50 h.p.**  
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- MOTOR CARS, Types, Nissan Cedric Special**  
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- MOTOR CARS, Types, Opel**  
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Opels: Kapitän, Admiral, Diplomat. Autocar, 120 (28 Feb 64) p.372-4. il.
- MOTOR CARS, Types, Panhard 24CT Sports Coupé, Road tests**  
Autocar road test 1970: Panhard 24CT Sports Coupé 848 c.c. Autocar, 120 (17 Apr 64) p.726-30. il.  
Panhard 24 CT. Motor (17 Jun 64) p.38-42. il.
- MOTOR CARS, Types, Porsche 904 Carrera GTS**  
On test: Porsche 904 GTS. B. Cahier. Autocar, 120 (6 Mar 64) p.434+. il.
- MOTOR CARS, Types, Porsche 1600 Carrera, Conversions**  
Carrera ole! Retired competition Porsche given a long stride. Autocar, 120 (12 Jun 64) p.1166-7. il.
- MOTOR CARS, Types, Porsche 1600 SC, Road tests**  
Porsche 1600 SC. Motor (8 Jul 64) p.24-9. il.
- MOTOR CARS, Types, Raiton Light Sports Tourer**  
Were those the days? Autocar, 120 (3 Jan 64) p.24-7. il.
- MOTOR CARS, Types, Rambler 770 Six, Road tests**  
Autocar road test 1965: Rambler 770 Six 3,206 c.c. Autocar, 120 (13 Mar 64) p.476-80. il.
- MOTOR CARS, Types, Reliant Rebel**  
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Reliant's two newcomers. Automotive Design Engng., 3 (Oct 64) p.112-13. il.  
Two new Reliants prove glass-fibre adaptability. Automotive Body Engng., 134 (Sep 64) p.14-15. il.
- MOTOR CARS, Types, Reliant Sabre 6 G.T., Toad tests**  
Autocar road test 1968: Reliant Sabre Six G.T. 2,553 c.c. Autocar, 120 (3 Apr 64) p.616-20. il.  
Reliant Sabre Six GT. Motor (10 Jun 64) p.24-8. il.
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- MOTOR CARS, Types, Renault R4L**  
Equally at home on rough or road. Engineering, 197 (6 Mar 64) p.341. il.
- MOTOR CARS, Types, Renault R8**  
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- MOTOR CARS, Types, Renault R8, Road tests**  
Renault R8—the automatic car. Motor (27 May 64) p.34-6. il.
- MOTOR CARS, Types, Renault R8 1100**  
Renault R8 1100. Autocar, 120 (21 Feb 64) p.326-8. il.  
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- MOTOR CARS, Types, Renault R8 1100, Road tests**  
Autocar road test 1977: Renault R8 1100 1,108 c.c. Autocar, 120 (5 Jun 64) p.1084-8. il.  
Renault R8 1100. Motor (16 Sep 64) p.26-8. il.
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- MOTOR CARS, Types, Renault Dauphine**  
Renault Dauphine: spot check. Motor (8 Apr 64) p.98-9. il.
- MOTOR CARS, Types, Renault Floride Caravelle, Road tests**  
Road test no. 3/64: Renault Caravelle. Motor, 124 (15 Jan 64) p.48-51. il.
- MOTOR CARS, Types, Riley 1.5**  
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- MOTOR CARS, Types, Rochdale Olympic Phase II, Road tests**  
Brief road test: Rochdale Olympic Phase 11. Autocar, 120 (28 Feb 64) p.388-9. il.
- MOTOR CARS, Types, Rolls-Royce 40/50 h.p.**  
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- MOTOR CARS, Types, Rootes 1600**  
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- MOTOR CARS, Types, Rover 3 Litre Coupé, Road tests**  
Road test no.10/64: Rover 3-litre Coupé automatic. Motor, 125 (4 Mar 64) p.38-41. il.
- MOTOR CARS, Types, Rover 3-litre Saloon Automatic, Road tests**  
Autocar road test 2001: Rover 3-litre Automatic 2,995 c.c. Autocar, 121 (13 Nov 64) p.1022-6. il.
- MOTOR CARS, Types, Rover 2000**  
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- MOTOR CARS, Types, Rover B.R.M.**  
Improved Rover-B.R.M. for 1964 Le Mans. Mass Production, 40 (May 64) p.48.
- MOTOR CARS, Types, Rover P4**  
Rover P4: spot check. Motor (16 Sep 64) p.114-15. il.
- MOTOR CARS, Types, Simca 1000 GL**  
Impressions of the latest Simca 1000 GL. Autocar, 121 (21 Aug 64) p.388-9. il.
- MOTOR CARS, Types, Simca 1000 GLS, Road tests**  
Simca 1000 GLS. Motor (9 Dec 64) p.20-4. il.



**MOTOR CARS, Types, Simca 1300 GL, Road tests**

Extended road test no. 4/64: Simca 1300 Grand Luxe. Motor, 124 (22 Jan 64) p.48-53. il.

**MOTOR CARS, Types, Simca 1500, Road tests**

Autocar road test 1985: Simca 1500 1,475 c.c. Autocar, 121 (31 Jul 64) p.220-4. il.

Simca 1500. Motor (1 Jul 64) p.24-8. il.

**MOTOR CARS, Types, Singer Chamois, Road tests**

Autocar road test 2006: Singer Chamois 875 c.c. Autocar, 121 (18 Dec 64) p.1254-8. il.

**MOTOR CARS, Types, Singer Gazelle Series V, Road tests**

Autocar road test 1974: Singer Gazelle Series V 1,592 c.c. Autocar, 120 (15 May 64) p.930-4. il.

Road test no.2/64: Singer Gazelle series V automatic.

Motor, 124 (8 Jan 64) p.56-9. il.

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Skoda: the background story. H. Snabl. Motor (25 Nov 64) p.34-5. il.

Skoda 1000MB. Autocar, 121 (6 Nov 64) p.984-9. il.

**MOTOR CARS, Types, Skoda Octavia**

Skoda Octavia and Octavia Super: spot check. Motor (24 Jun 64) p.112-13. il.

**MOTOR CARS, Types, Skoda Octavia Super**

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Standard Vanguard III, Sportsman, Vignale, Ensign: spot check. Motor (13 May 64) p.114-15. il.

**MOTOR CARS, Types, Standard 8**

Standard Eight and Ten: spot check. Motor (1 Apr 64) p.82-3. il.

**MOTOR CARS, Types, Standard 10**

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**MOTOR CARS, Types, Standard-Triumph 2000, Road tests**

Autocar road test 1956: Triumph 2000 1,998 c.c. Autocar 120 (10 Jan 64) p.66-70. il.

Triumph 2000 extended test. Motor (11 Mar 64) p.66-71. il.

**MOTOR CARS, Types, Standard-Triumph Herald**

Triumph Herald: spot check. Motor (8 Jul 64) p.120-1. il.

**MOTOR CARS, Types, Standard-Triumph Herald 1200, Road tests**

Triumph Herald 1200. Motor (25 Nov 64) p.24-8. il.

**MOTOR CARS, Types, Standard-Triumph Herald 12/50**

Triumph Herald 12/50 progress report: faster and more economical after 36,000 miles. T. Kyd. Motor (26 Aug 64) p.22-3. il.

**MOTOR CARS, Types, Standard-Triumph Herald 12/50, Road tests**

Extended road test no 6/64: Triumph Herald 12/50. Motor, 125 (5 Feb 64) p.64-69. il.

**MOTOR CARS, Types, Standard-Triumph Spitfire Stage 2, Road tests**

Stage Two Triumph Spitfire. Motor (22 Apr 64) p.32-6. il.

**MOTOR CARS, Types, Standard-Triumph TR2**

Triumph TR2 and TR3: spot check. Motor (27 May 64) p.118-119. il.

**MOTOR CARS, Types, Standard-Triumph TR3**

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**MOTOR CARS, Types, Studebaker Avanti, Road tests**

Avanti—the lost cause. Motor, 124 (29 Jan 64) p.58+. il.

**MOTOR CARS, Types, Sunbeam Alpine Series 3 Sports Tourer**

Two-pedal Alpine. Motor, 124 (15 Jan 64) p.34-5. il.

**MOTOR CARS, Types, Sunbeam Alpine Series 4**

Sunbeam Alpine series IV. Autocar, 120 (17 Jan 64) p.103. il.

**MOTOR CARS, Types, Sunbeam Alpine Series 4 GT**

Automatic transmission goes sporting. Engineering, 197 (26 Jun 64) p.863. il.

**MOTOR CARS, Types, Sunbeam Alpine Series 4 GT, Road tests**

Autocar road test 1975: Sunbeam Alpine GT series IV automatic 1,592 c.c. Autocar, 120 (22 May 64) p.984-8. il.

Sunbeam Alpine IV automatic. Motor (7 Oct 64) p.20-4. il.

**MOTOR CARS, Types, Sunbeam Rapier Series 4, Road tests**

Autocar road test 1984: Sunbeam Rapier Series IV 1,592 c.c. Autocar, 121 (24 Jul 64) p.170-4. il.

Sunbeam Rapier Mk IV. Motor (8 Apr 64) p.24-9. il.

**MOTOR CARS, Types, Sunbeam Tiger**

Sunbeam Tiger 260. Autocar, 120 (10 Apr 64) p.664-7. il.

**MOTOR CARS, Types, Trojan Tourer, Road tests**

Christmas road test: 1928 Trojan Tourer. Motor, 124 (25 Dec 63) p.38-41. il.

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4-litre "Princess R". Engineer, 218 (28 Aug 64) p.308-9. il.

Out of Rolls-Royce and BMC... Engineering, 198 (21 Aug 64) p.249-50. il.

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**MOTOR CARS, Types, Vanden Plas Princess 4-litre R, Road tests**

Autocar road test no.1989: Vanden Plas Princess R 3,909 c.c. Autocar, 121 (28 Aug 64) p.406-10. il.

Vanden Plas Princess R. Motor (26 Aug 64) p.16-20. il.

**MOTOR CARS, Types, Vanden Plas Princess 1100, Road tests**

Vanden Plas Princess 1100. Motor (28 Oct 64) p.44-8. il.

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New Victor and VX4/90: major re-design for Vauxhall's medium sized family cars. Motor (21 Oct 64) p.128-31. il.

**MOTOR CARS, Types, Vauxhall Cresta PA series**

Vauxhall Velox and Cresta PA series: spot check. Motor (17 Jun 64) p.136-7. il.

**MOTOR CARS, Types, Vauxhall Cresta PB series**

100 m.p.h. Vauxhalls. Motor (7 Oct 64) p.17-18. il.

Vauxhall Velox and Cresta—3.3-litres. Autocar, 121 (2 Oct 64) p.640-2. il.

**MOTOR CARS, Types, Vauxhall FB series**

Victor FB—saloon, estate, VX 4/90: spot check. Motor (4 Nov 64) p.104-5. il.

**MOTOR CARS, Types, Vauxhall VX 4/90, Road tests**

Autocar road test 1980: Vauxhall VX 4-90 1,594 c.c. Autocar, 120 (26 Jun 64) p.1240-4. il.

Vauxhall VX 4-90. Motor (15 Apr 64) p.32-6. il.

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**MOTOR CARS, Types, Vauxhall Velox PB series**

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**MOTOR CARS, Types, Vauxhall Victor**

End of part two: another 12,000 miles in the life of Eric Coughlin and a Series FB Vauxhall Victor. Motor (2 Sep 64) p.22-4. il.

**MOTOR CARS, Types, Vauxhall Victor 101**

Vauxhall Victor Series 101. Autocar, 121 (23 Oct 64) p.886 insert-887. il.

**MOTOR CARS, Types, Vauxhall Viva de luxe, Road tests**

Vauxhall Viva. Motor (4 Nov 64) p.24-8. il.

**MOTOR CARS, Types, Vauxhall Viva G.T.**

Lawrence Tune Vauxhall Viva GT. Autocar, 121 (28 Aug 64) p.418-19. il.

- MOTOR CARS, Types, Volkswagen 1200**  
VW 1200 saloons: spot check. Motor (12 Aug 64) p.103-9. il.
- MOTOR CARS, Types, Volkswagen 1200, Conversions**  
Shorrock supercharged Volkswagen 1200. Autocar, 120 (10 Apr 64) p.702-3. il.
- MOTOR CARS, Types, Volkswagen 1500S, Road tests**  
Autocar road test 1967: Volkswagen 1500S 1,493 c.c. Autocar, 120 (27 Mar 64) p.568-72. il.
- MOTOR CARS, Types, Volvo**  
Volvo B16 and B18 models: spot check. Motor (2 Dec 64) p.100-1. il.
- MOTOR CARS, Types, Wartburg 1000, Road tests**  
Wartburg 1000. Motor (19 Aug 64) p.24-8. il.
- MOTOR CARS, Types, Wolseley 6/110, Road tests**  
Extended road test no.7/64: Wolseley 6/110. Motor, 125 (12 Feb 64) p.48-53. il.
- MOTOR CARS, Types, Wolseley 6/110 Mk.2**  
B.M.C. C-series changes. Autocar, 120 (29 May 64) p.1052-3. il.
- MOTOR CARS, Types, Wolseley 1500**  
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- MOTOR CARS, Types, Wolseley Hornet, Conversions**  
Viking Hornet Sport 998 c.c. Autocar, 120 (17 Jan 64) p.122-3. il.
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- MOTOR CARS, Windows, Cleaning**  
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- MOTOR CARS, Windscreens, Safety**  
Important contribution to road safety—Triplex safety glass. Passenger Transport, 127 (Jan 64) p.22+. il.
- MOTOR CARS, Wishbones, Assembly**  
Auto-assembly machines beat component variables [Hi-Ton Machine tools Ltd.] P. J. Varley. Metalworking Production, 108 (21 Oct 64) p.73-5. il.  
Vauxhall automatic assembly: upper wishbones for the Vauxhall Victor assembled on Hi-Ton in-line transfer machines. Automobile Engr., 54 (Oct 64) p.446-50. il.
- MOTOR CATAMARAN BOATS.** See BOATS, Catamaran, Motor
- MOTOR COACHES**  
Another B.M.M.O. coach for the motorway [C.M. 6T] Passenger Transport, 127 (Nov 64) p.555-6. il.  
Forward thinking in Canadian long-distance coach design [Challenger MC-5] Transport J., 22 (10 Jan 64) p.36-8. il.  
Good looks—but a lack of individuality: coaches retain family distinctions while single-deck buses are all of a pattern. F. K. Moses. Commercial Motor, 120 (2 Oct 64) p.130+. il.  
Midland "Red" introduces new motorway coach [C.M. 6T] Transport J., 23 (Nov 64) p.544-5. il.  
P.s.v. progress since the Show of 1962. S. C. Vince. Transport J., 23 (11 Sep 64) p.222-4. il.
- MOTOR COACHES, Bodies**  
Bodies. Bus & Coach, 36 (18 Nov 64) p.445-9. il.
- MOTOR COACHES, Bodies, Buyers' guides**  
British touring coach bodywork: market survey no.4. Commercial Motor, 120 (6 Nov 64) p.84+. il.
- MOTOR COACHES, Booking systems**  
Handling day bookings at Victoria. Bus & Coach, 36 (Aug 64) p.292-3. il.
- MOTOR COACHES, Brakes**  
Brakes. Bus & Coach, 36 (18 Nov 64) p.454-7. il.
- MOTOR COACHES, Brakes, Hydraulic**  
Double-safety brake system for high-speed coach [Lockheed system for Midland Red express coaches] Automotive Design Engrng., 3 (Sep 64) p.92. il.
- MOTOR COACHES, Chassis**  
A.E.C.'s Swift takes two basic forms. P. M. A. Thomas. Bus & Coach, 36 (Sep 64) p.318-19. il.  
A.E.C.'s first rear-engined chassis—the Swift. Passenger Transport, 127 (Sep 64) p.408+. il.  
Chassis. Bus & Coach, 36 (18 Nov 64) p.440-4. il.  
Cummins V6 at rear on new Daimler single-decker [Roadliner] Commercial Motor, 120 (4 Sep 64) p.68-70. il.  
Daimler adopts a Vee engine [Roadliner] Passenger Transport, 127 (Oct 64) p.482+. il.  
Daimler's Cummins-engined unit. P. M. A. Thomas. Bus & Coach, 36 (Sep 64) p.315-17. il.  
Daimler's Roadliner takes a bow: Cummins V6 rear-engined single-decker bus and coach chassis. Transport World (Sep 64) p.38-9. il.  
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Latest Daimler p.s.v. chassis has V6 rear-mounted engine. Transport J., 23 (11 Sep 64) p.230-1. il.  
Leyland introduces new rear-engined chassis for single-deckers [Panther] Transport J., 22 (14 Feb 64) p.138-9. il.



**MOTOR COACHES, Chassis—cont.**

Leyland Panther. Passenger Transport, 127 (Mar 64) p.118-22. il.

Leyland Panther: a new range of bus & coach chassis for 36-foot bodies. Transport World (Feb 64) p.26+. il.

Leyland's latest is the Panther. Commercial Motor, 119 (7 Feb 64) p.56+. il.

Leyland's Panther Cub is a lightweight. J. M. Dickson-Simpson. Bus & Coach, 36 (Sep 64) p.320-2. il.

Leyland's Panther has a cub. Commercial Motor, 120 (4 Sep 64) p.55-6. il.

Move the engine and help the driver [Leyland Panther chassis] Engineering, 197 (7 Feb 64) p.218-19. il.

New rear-engined passenger chassis from A.E.C. [Swift] Commercial Motor, 120 (4 Sep 64) p.42+. il.

Same size—different breed: Leyland's 'rear-engined Leopard' is called the Panther. J. Dickson-Simpson. Bus & Coach, 36 (Feb 64) p.42-4. il.

Sampling the Bristol "RE". A. A. Townsin. Passenger Transport, 127 (May 64) p.222+. il.

Swift and Merlin by A.E.C. Transport World (Sep 64) p.40-1. il.

Two new Leylands at Earls Court: new 'junior' version of Panther rear-engined single-decker bus and flat-floor variant of the Atlantean double-decker added to the range. Passenger Transport, 127 (Oct 64) p.498-501. il.

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Buyers' make-by-make guide to British passenger chassis. Commercial Motor, 120 (6 Nov 64) p.79+. il.

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Future design requirements in passenger vehicles. S. C. Vince. Commercial Motor, 120 (25 Sep 64) p.210+

Impact of some problems and practices of tomorrow on design. Bus & Coach, 36 (18 Nov 64) p.435-9. il.

Operational needs must dictate future design. J. M. Dickson-Simpson. Bus & Coach, 36 (Oct 64) p.348-53. il.

**MOTOR COACHES, Diesel engines**

Engines. Bus & Coach, 36 (18 Nov 64) p.450-3. il.

**MOTOR COACHES, Electrical equipment**

Electrical. Bus & Coach, 36 (18 Nov 64) p.461-3. il.

**MOTOR COACHES, Fares, Collection, Machines**

Booking and controlling express services by modern methods [United Counties Omnibus Co.] W. Lambden. Bus & Coach, 36 (Jul 64) p.240-2. il.

**MOTOR COACHES, Interior design**

Dressing your coaches without costly mistakes. J. W. Womar. Transport World (Jun 64) p.15-16. il.

Home from home... A. Woolf. Commercial Motor, 120 (6 Nov 64) p.114-16. il.

Industrial design looks at coach interiors. N. Chapman. Bus & Coach, 36 (Apr 64) p.116-19. il.

**MOTOR COACHES, Interiors, Materials**

Progress with new materials for vehicle interiors. M. Clements. Bus & Coach, 36 (Dec 64) p.470+. il.

**MOTOR COACHES, Maintenance**

Accessibility should be improved. R. B. Waite. Bus & Coach, 36 (Jul 64) p.253-7. il.

**MOTOR COACHES, Maintenance, Depots**

Medley of new and rebuilt depots. Bus & Coach, 36 (Jan 64) p.21-3. il.

**MOTOR COACHES, Manufactures**

Local manufacture—a vital part of export to Europe. A. J. P. Wilding. Commercial Motor, 119 (1 May 64) p.157-60. il.

**MOTOR COACHES, Operation**

Buying second-hand satisfies both owner and customer. S. MacArthur. Bus & Coach, 36 (Dec 64) p.474-7. il.

Changing scene in the excursion and tour world. S. MacArthur. Bus & Coach, 36 (Feb 64) p.56-8. il.

Pressing on rewardless [Adams Bros., Dorset-Wilts. border] R. C. Carpenter. Bus & Coach, 36 (Feb 64) p.45-7. il.

There's room at the top [Whitefriars Coaches] J. R. Southgate. Transport World (Feb 64) p.40+. il.

There's still a chance to expand [Bowerman's Tours, Taunton] W. Lambden. Bus & Coach, 36 (Feb 64) p.66-9. il.

**MOTOR COACHES, Operation, Costs**

Every vehicle, every activity, is costed [Wallace Arnold group] W. Lambden. Bus & Coach, 36 (Feb 64) p.38-40. il.

**MOTOR COACHES, Operation, Education**

How the Industrial Training Act affects every operator. A. R. Dyke. Bus & Coach, 36 (Apr 64) p.124-6

**MOTOR COACHES, Operation, London—Newcastle-upon-Tyne**

Running Newcastle upon Tyne—London overnight [United Automobile Services] Bus & Coach, 36 (Apr 64) p.127-9. il.

**MOTOR COACHES, Operation, Motorways**

Coach operators seize motorway opportunities. Transport World (Feb 64) p.48-9. il.

Engineering aspects of motorway coach operations. J. Carmarthen. Bus & Coach, 36 (Apr 64) p.147-50. il.

Motorway express service revitalizes a stage facility [Birch Bros.] S. MacArthur. Bus & Coach, 36 (Apr 64) p.120-3. il.

Using motorways to advantage. Bus & Coach, 36 (Apr 64) p.151-3. il.

**MOTOR COACHES, Operation, Northern Ireland**

Northern Ireland—'no paradise for coach operators'. J. P. B. Ryan. Passenger Transport, 127 (Dec 64) p.586-8. il.

**MOTOR COACHES, Operation, South Wales**

Express coaching in Wales: Neath and Cardiff company opens new headquarters. Transport World (Dec 63) p.24-5. il.

**MOTOR COACHES, Rural, Transport**

Truly rural and no rail [Cotswolds] P. A. C. Brockington. Commercial Motor, 120 (20 Nov 64) p.66-8. il.

**MOTOR COACHES, Safety, Research**

Collision course: General Motors crashes a coach for seat and safety belt research. Transport World (Nov 64) p.20-1. il.

**MOTOR COACHES, Seat reservation, Telex**

Booking and controlling express services by modern methods [United Counties Omnibus Co.] W. Lambden. Bus & Coach, 36 (Jul 64) p.240-2. il.

**MOTOR COACHES, Specifications**

Specifications. Bus & Coach, 36 (18 Nov 64) p.464-8

**MOTOR COACHES, Stations, Exeter**

Exeter's two-level bus and coach station. Passenger Transport, 127 (Sep 64) p.426-7. il.

Exeter's new bus and coach station. Transport World (Aug 64) p.20-1. il.

**MOTOR COACHES, Transmissions**

Transmission. Bus & Coach, 36 (18 Nov 64) p.458-60. il.

**MOTOR COACHES, Transport**

Four-point plan for express services. W. Coombs. Bus & Coach, 36 (Aug 64) p.298-302. il.

North-East independent: continuing success of Wilkinson's of Sedgfield. W. R. Lang. Passenger Transport, 127 (Aug 64) p.382-3. il.

1,000-vehicle fleet sets high operating standard [United Automobile Services Ltd.] Transport J., 23 (10 Jul 64) p.30-3. il.

Sixty years of Midland Red. F. K. Moses. Commercial Motor, 120 (27 Nov 64) p.44+. il.



**MOTOR COACHES, Types, A.E.C. Regal Mk.6—Jonckheere**

Long coaches for long distances: how British design is being influenced by the Continentals. J. Dickson-Simpson. *Bus & Coach*, 36 (Apr 64) p.140-1. il.  
Smooth run to Geneva. J. F. Moon. *Commercial Motor*, 119 (27 Mar 64) p.48-50. il.

**MOTOR CYCLES**

He can't get enough space. "Bruffman". *Motor Cycle*, 112 (2 Jan 64) p.6-7. il.

**MOTOR CYCLES—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

**Technical activities**

*Maintenance  
Photography*

**Parts**

*Transmissions  
Gearboxes  
Clutches  
Brakes  
Wheels  
Engines  
Carburettors  
Electrical equipment  
Lamps*

**Types**

*Racing  
Dragster*

**Ancillaries**

*Sidecars*

**MOTOR CYCLES, Brakes**

Fact or myth. P. Vincent. *Motor Cycle*, 113 (12 Nov 64) p.826-8. il.  
Wanted—a genius. V. Willoughby. *Motor Cycle*, 113 (22 Oct 64) p.714-15. il.

**MOTOR CYCLES, Carburettors**

Twice round the gasworks. B. Currie. *Motor Cycle*, 112 (13 Feb 64) p.204-6. il.  
Understanding the Kei-Hin. *Motor Cycle*, 113 (3 Dec 64) p.946-8. il.

**MOTOR CYCLES, Carburettors, Maintenance**

Two-stroke carb check. B. Currie. *Motor Cycle*, 113 (9 Jul 64) p.212-14. il.

**MOTOR CYCLES, Clutches, Maintenance**

Villiers clutch check: adjustments for sweet operation. *Motor Cycle*, 112 (23 Apr 64) p.502-4. il.

**MOTOR CYCLES, Dragster**

Firing it off [Drag-Way] V. Willoughby. *Motor Cycle*, 113 (17 Sep 64) p.558-61. il.  
Hagon 1,000. *Motor Cycling* (8 Aug 64) p.10-11. il.  
He calls it "Twin Thing" *Motor Cycling* (28 Nov 64) p.11. il.  
One-gear wonder [Hagon 996 c.c.] V. Willoughby. *Motor Cycle*, 113 (27 Aug 64) p.458-60. il.  
So this is hell [Satan thousand sprinter] V. Willoughby. *Motor Cycle*, 113 (13 Aug 64) p.364-7. il.  
Taking a back seat [Drag-Way] V. Willoughby. *Motor Cycle*, 113 (3 Sep 64) p.468-72. il.  
Two bikes three engines. V. Willoughby. *Motor Cycle*, 113 (15 Oct 64) p.674-6. il.  
Two-foot Four. B. Currie. *Motor Cycle*, 113 (10 Dec 64) p.982-3. il.

**MOTOR CYCLES, Electrical equipment, Maintenance**

Wipac check-over. B. Currie. *Motor Cycle*, 112 (30 Apr 64) p.540-1. il.

**MOTOR CYCLES, Engines**

Comments from Honda on the search for higher engine performance. Y. Nakamura. *Automotive Design Engrg.*, 3 (Aug 64) p.69-71. il.

Modern engines: 75cc BSA Beagle. B. Currie. *Motor Cycle*, 112 (16 Apr 64) p.480-3. il.

**MOTOR CYCLES, Engines, Compression ratio**

High compression for economy and zing. P. Vincent. *Motor Cycle*, 113 (9 Jul 64) p.198-9. il.

**MOTOR CYCLES, Engines, Lubricating oils**

What's in an oil? Pt.1. P. Vincent. *Motor Cycle*, 113 (16 Jul 64) p.246-7. il.

What's in an oil? Pt.2. P. Vincent. *Motor Cycle*, 113 (23 Jul 64) p.282-3. il.

**MOTOR CYCLES, Engines, Maintenance**

Basement check. V. Willoughby. *Motor Cycle*, 112 (7 May 64) p.558-60. il.

Gen from Villiers. *Motor Cycle*, 112 (28 May 64) p.652-4. il.  
When to rebore. V. Willoughby. *Motor Cycle*, 112 (30 Apr 64) p.546-8. il.

**MOTOR CYCLES, Engines, Valves, Maintenance**

Keeping the valve gear happy—is it worn out? V. Willoughby. *Motor Cycle*, 112 (23 Apr 64) p.510-12. il.

**MOTOR CYCLES, Gearboxes**

Outlook changeable. B. Currie. *Motor Cycle*, 112 (2 Apr 64) p.418-20. il.

**MOTOR CYCLES, Gearboxes, Maintenance**

What's in the box? Is it worn out? V. Willoughby. *Motor Cycle*, 113 (11 Jun 64) p.66-7. il.

**MOTOR CYCLES, Lamps**

Current account. B. Currie. *Motor Cycle*, 112 (16 Jan 64) p.72-4. il.

**MOTOR CYCLES, Lamps, Spot**

Far and wide. J. Ebbrell. *Motor Cycle*, 113 (8 Oct 64) p.640-3. il.

**MOTOR CYCLES, Maintenance**

Clean and tidy. C. Rogers. *Motor Cycle*, 112 (14 May 64) p.604-5. il.

Honda twins: service shop lore no.18. *Motor Cycle*, 113 (25 Jun 64) p.136-9. il.

Is it worn out? Steering, stoppers and suspensions. V. Willoughby. *Motor Cycle*, 113 (6 Aug 64) p.342-4. il.  
Tips from Monty Banks. *Motor Cycle*, 113 (18 Jun 64) p.104-5. il.

**MOTOR CYCLES, Parts**

Bolt-on power: special survey of over-the-counter speed equipment. *Motor Cycling* (26 Feb 64) p.6-7. il.

**MOTOR CYCLES, Parts, Aluminium alloys, Die casting, Pressure**

Die casting practice at the Czech motor-cycle works, Strakonice. S. Blazek. *Machinery*, 105 (29 Jul 64) p.323-7. il.

**MOTOR CYCLES, Parts, Corrosion, Inhibitors**

Corrosion. J. Ebbrell. *Motor Cycle*, 111 (26 Dec 63) p.768-70. il.

**MOTOR CYCLES, Parts, Metals, Fatigue**

Highway robber. P. Vincent. *Motor Cycle*, 113 (11 Jun 64) p.58-9. il.

**MOTOR CYCLES, Parts, Polyester—Glass fibre**

How Mitchenhall Brothers maintain "Avon quality". Reinforced Plastics, 9 (Sep 64) p.10-12. il.

**MOTOR CYCLES, Photography**

Shooting winners. R. H. Mason. *Motor Cycle*, 113 (16 Jul 64) p.238-41. il.

**MOTOR CYCLES (Racing)**

TT technical aspects, pt.1: boot on the other foot. V. Willoughby. *Motor Cycle*, 113 (25 Jun 64) p.116-19. il.

TT technical aspects, pt.2: they're laughing. V. Willoughby. *Motor Cycle*, 113 (2 Jul 64) p.156-9. il.  
Technical eye on the TT. P. Irving. *Motor Cycling* (27 Jun 64) p.5+. il.

**MOTOR CYCLES (Racing) Engines**

8.5 bhp at 13,500: first inside view of Honda's 50cc production racer. M. Woollett. *Motor Cycling* (12 Feb 64) p.8-9. il.

Heart of the matter: Bert Greeves reveals the story behind the 246 cc engine of the Silverstone mark 2 racing two-stroke. V. Willoughby. *Motor Cycle*, 113 (20 Aug 64) p.398-402. il.

**MOTOR CYCLES (Racing) Engines, Ignition, Transistor circuits**

Transistors in the island. B. Currie. *Motor Cycle*, 112 (5 Mar 64) p.280-1. il.

**MOTOR CYCLES (Racing) Engines, Tuning**

Around the race shops. D. Dixon. *Motor Cycle*, 112 (19 Mar 64) p.346-8. il.

Brewing-up. D. Dixon. *Motor Cycle*, 112 (12 Mar 64) p.312-14. il.

**MOTOR CYCLES (Racing) Engines, Two-stroke**

Achilles with many heels: basic weaknesses of the two-stroke racing engine. P. Vincent. *Motor Cycle*, 113 (10 Sep 64) p.524-5. il.

No surrender: the two-stroke versus four-stroke battle continues. P. Irving. *Motor* (2 Sep 64) p.98+. il.

**MOTOR CYCLES (Racing) Gearboxes**

8.5 bhp at 13,500: first inside view of Honda's 50cc production racer. M. Woollett. *Motor Cycling* (12 Feb 64) p.8-9. il.

**MOTOR CYCLES (Racing) Sidecars**

500 Honda four: sensational new Alan Young special. *Motor Cycling* (5 Feb 64) p.5. il.

**MOTOR CYCLES, Sidecars**

Luggage out, kiddie.in! New Watsonian single-seater with room for a little 'un. *Motor Cycle*, 113 (1 Oct 64) p.606-7. il.

**MOTOR CYCLES, Sidecars, Driving**

Third wheel lucky. M. Evans. *Motor Cycle*, 113 (27 Aug 64) p.455-7. il.

**MOTOR CYCLES, Sidecars, Road tests**

BMW R60 and Watsonian 'Monza'. *Motor Cycling* (6 Jun 64) p.7. il.

**MOTOR CYCLES, Sidecars, Trailers**

Taken in tow. J. Ebbrell. *Motor Cycle*, 112 (21 May 64) p.642-4. il.

**MOTOR CYCLES, Transmissions, Maintenance**

Look at the drive. V. Willoughby. *Motor Cycle*, 112 (21 May 64) p.634-5. il.

**MOTOR CYCLES, Types, AER Macchi, Tests**

248 cc AER Macchi. *Motor Cycling* (5 Dec 64) p.7. il.

**MOTOR CYCLES, Types, A.J.S.**

Atlas engines for AJS and Matchless. *Motor Cycle*, 113 (22 Oct 64) p.716-17. il.

**MOTOR CYCLES, Types, Ariel Arrow 200, Road tests**

199 cc Ariel Arrow 200. *Motor Cycle*, 113 (15 Oct 64) p.686-7. il.

**MOTOR CYCLES, Types, Ariel Leader, Road tests**

Million-mile test. J. Ebbrell. *Motor Cycle*, 112 (30 Jan 64) p.130-4. il.

**MOTOR CYCLES, Types, Ariel Sports Super Arrow, Road tests**

247cc Ariel 'Arrow Super Sports'. *Motor Cycling* (11 Mar 64) p.7. il.

**MOTOR CYCLES, Types, Ariel Square Four**

Square Four for four. J. Hay. *Motor Cycle*, 112 (23 Jan 64) p.94-6. il.

**MOTOR CYCLES, Types, B.S.A.**

BSA new twin roadburners. *Motor Cycling* (10 Oct 64) p.5. il.

Twin-carb BSA speedsters. *Motor Cycle*, 113 (8 Oct 64) p.664-6. il.

**MOTOR CYCLES, Types, B.S.A. 420 c.c.**

420 BSA story. B. Osborne. *Motor Cycling* (25 Jul 64) p.7. il.

**MOTOR CYCLES, Types, B.S.A. A50 Star, Road tests**

499 cc BSA A50 Star. *Motor Cycle*, 112 (28 May 64) p.670-2. il.

**MOTOR CYCLES, Types, B.S.A. A65 Rocket, Road tests**

654 cc BSA A65 Rocket. *Motor Cycle*, 112 (23 Jan 64) p.102-4. il.

**MOTOR CYCLES, Types, B.S.A. A65L Lightning, Road tests**

654 cc A65L BSA Lightning. *Motor Cycles*, 113 (26 Nov 64) p.892-4. il.

**MOTOR CYCLES, Types, B.S.A. Bantam Super**

Bantam breed. *Motor Cycle*, 113 (17 Dec 64) p.994-6. il.

**MOTOR CYCLES, Types, B.S.A. Beagle, Road tests**

75 cc BSA Beagle. B. Currie. *Motor Cycle*, 112 (7 May 64) p.562-3. il.

**MOTOR CYCLES, Types, B.S.A. D7 "Bantam Super", Road tests**

173 cc BSA D7 Bantam Super. *Motor Cycle*, 112 (12 Mar 64) p.316-17. il.

**MOTOR CYCLES, Types, CZ 250c.c.**

Robert's 250cc CZ. *Motor Cycling* (15 Aug 64) p.5. il.  
What's the secret of Robert's CZ? Power that you can use. *Motor Cycling* (28 Nov 64) p.5. il.

**MOTOR CYCLES, Types, Caldicott Special**

Country lane special [490 cc Caldicott] B. Currie. *Motor Cycle*, 112 (30 Apr 64) p.524-5. il.

**MOTOR CYCLES, Types, Cotton**

Gloucester stars. *Motor Cycle*, 113 (5 Nov 64) p.790-1. il.

**MOTOR CYCLES, Types, Cotton Telstar**

'Telstar' 250 try-out. B. Main-Smith. *Motor Cycling* (28 Mar 64) p.7+. il.

247 cc Cotton 'Telstar'. *Motor Cycling* (14 Nov 64) p.5. il.

**MOTOR CYCLES, Types, Ducati Daytona, Road tests**

249 cc Ducati Daytona. *Motor Cycle*, 112 (14 May 64) p.596-7. il.

**MOTOR CYCLES, Types, Ducati Mach 1, Road tests**

249 cc Ducati Mach 1. *Motor Cycle*, 113 (5 Nov 64) p.774-5. il.

**MOTOR CYCLES, Types, Francis-Barnett Sports Fulmar, Road tests**

Francis-Barnett. 'Sports Fulmar 90'. *Motor Cycling* (9 May 64) p.7. il.

**MOTOR CYCLES, Types, Garelli Oulton Special, Road tests**

94 cc Garelli Oulton Special. *Motor Cycle*, 112 (9 Apr 64) p.446-7. il.

**MOTOR CYCLES, Types, Gilera 123cc, Road tests**

Gilera 123 cc six days special. *Motor Cycle*, 113 (9 Jul 64) p.200-1. il.

123cc Gilera 'Seigiorni Speciale'. *Motor Cycling* (31 Oct 64) p.5. il.

**MOTOR CYCLES, Types, Gilera Jubilee, Road tests**

173 cc Gilera Jubilee. *Motor Cycle*, 111 (26 Dec 63) p.776-7. il.

**MOTOR CYCLES, Types, Greeves Challenger**

All Greeves 'Challenger'. M. Woollett. *Motor Cycling* (19 Feb 64) p.7. il.

Champ chaser. *Motor Cycle*, 112 (27 Feb 64) p.228-30. il.

Unburstable urge. *Motor Cycling* (17 Oct 64) p.7. il.

**MOTOR CYCLES, Types, Greaves Silverstone, Tests**

'Manx' Greeves 'Silverstone'. *Motor Cycling* (14 Nov 64) p.9. il.

**MOTOR CYCLES, Types, Guzzi Zigolo Tourer**

110 cc Moto-Guzzi Zigolo. *Motor Cycle*, 112 (27 Feb 64) p.248-9. il.

**MOTOR CYCLES, Types, Hedlund Special**

Punch! Riding Rolf's warhorse. M. Bashford. *Motor Cycling* (5 Sep 64) p.7. il.

**MOTOR CYCLES, Types, Honda**

Dozen to choose from: two new Honda twins and an overhead-camshaft single for 1965. *Motor Cycle*, 113 (22 Oct 64) suppl. p.10A-14A. il.

**MOTOR CYCLES, Types, Honda 50**

8 in the box: the fantastic multi-speed Honda. B. Main-Smith. *Motor Cycling* (4 Apr 64) p.7. il.

**MOTOR CYCLES, Types, Honda C200**

87 cc Honda C200. *Motor Cycling* (8 Jan 64) p.7. il.

**MOTOR CYCLES, Types, Honda C200, Road tests**

87 cc Honda C200. *Motor Cycle*, 113 (4 Jun 64) p.10-11. il.

**MOTOR CYCLES, Types, Honda CB 72, Road tests**

Honda Two Fifty Super Sport. M. Evans. *Motor Cycle*, 113 (10 Dec 64) p.970-4. il.

247 cc Honda CB 72. *Motor Cycle*, 113 (16 Jul 64) p.234-6. il.

**MOTOR CYCLES, Types, Honda CB 92, Road tests**

Honda CB 92 'Benly Super Sport'. *Motor Cycling* (4 Jul 64) p.5. il.

**MOTOR CYCLES, Types, Honda CB160 Sports, Road tests**

Honda CB160 Sports. *Motor Cycle*, 113 (22 Oct 64) suppt. p.16A-17A. il.

**MOTOR CYCLES, Types, Honda-Metisse**

It's (almost) too hot to handle. M. Bashford. *Motor Cycling* (28 Mar 64) p.5. il.

**MOTOR CYCLES, Types, Matchless**

Atlas engines for AJ's and Matchless. *Motor Cycle*, 113 (22 Oct 64) p.716-17. il.

**MOTOR CYCLES, Types, Matchless G15, Road tests**

745 cc Matchless G15. *Motor Cycle*, 113 (29 Oct 64) p.740-2. il.

**MOTOR CYCLES, Types, Matchless WD 347cc, Conversions**

For Sunday appetites. D. Dixon. *Motor Cycle*, 112 (28 May 64) p.668-9. il.

**MOTOR CYCLES, Types, Monard**

Brands Hatch verdict on the 500/650 Monards. B. Main-Smith. *Motor Cycling* (18 Apr 64) p.12. il.

**MOTOR CYCLES, Types, Norton**

Norton eightsome. *Motor Cycle*, 113 (22 Oct 64) p.728-9. il.

**MOTOR CYCLES, Types, Norton Dominator**

Verdict on Norton Featherbed Twins. J. Ebrell. *Motor Cycle*, 112 (23 Apr 64) p.494-7. il.

**MOTOR CYCLES, Types, Norton Dominator, Conversions**

Featherbed four. D. Dixon. *Motor Cycle*, 113 (5 Nov 64) p.792-3. il.

**MOTOR CYCLES, Types, Norton Electra 400, Road tests**

384 cc Norton ES 400. *Motor Cycle*, 112 (9 Jan 64) p.44-6. il.

**MOTOR CYCLES, Types, Pacemaker**

Pounding the Pacemaker. *Motor Cycling* (22 Jan 64) p.5. il.

**MOTOR CYCLES, Types, Royal Enfield**

States-style Interceptor: modifications to famous seven-fifty Twin; new semi-sports two-fifty. *Motor Cycle*, 113 (24 Sep 64) p.570-2. il.

**MOTOR CYCLES, Types, Royal Enfield Interceptor de luxe, Road tests**

Royal Enfield 'Interceptor de luxe'. *Motor Cycling* (2 May 64) p.7. il.

**MOTOR CYCLES, Types, Scott 350**

Hot Scott outing. B. Currie. *Motor Cycle*, 113 (23 Jul 64) p.266-8. il.

**MOTOR CYCLES, Types, Sprite**

More Sprites. *Motor Cycle*, 113 (16 Jul 64) p.258-9. il.

**MOTOR CYCLES, Types, Suzuki**

Suzy and her friends. *Motor Cycle*, 113 (5 Nov 64) p.784-5. il.

**MOTOR CYCLES, Types, Suzuki K11, Road tests**

Suzuki Sports 79 cc. *Motor Cycle*, 112 (19 Mar 64) p.363-4. il.

**MOTOR CYCLES, Types, Suzuki M15D Sovereign**

50cc Suzuki M15D 'Sovereign'. *Motor Cycling* (22 Jan 64) p.7. il.

**MOTOR CYCLES, Types, Triumph**

Better-than-ever Triumphs. *Motor Cycle*, 113 (8 Oct 64) p.668+. il.

Triumph trend is to the sportsters. *Motor Cycling* (10 Oct 64) p.5. il.

**MOTOR CYCLES, Types, Triumph 5 TA Speed Twin, Road tests**

490 cc Triumph 5TA 'Speed Twin'. *Motor Cycling* (15 Jan 64) p.5. il.

**MOTOR CYCLES, Types, Triumph Bonneville 120, Road tests**

649 cc Triumph Bonneville. *Motor Cycle*, 112 (21 May 64) p.620-2. il.

**MOTOR CYCLES, Types, Triumph Cub**

Triumph Tiger Cubs: riders' reports number three. *Motor Cycle*, 113 (30 Jul 64) p.300-3. il.

**MOTOR CYCLES, Types, Triumph Tiger Cub T20**

Triumph T20 'Tiger Cub'. *Motor Cycling* (29 Aug 64) p.7. il.

**MOTOR CYCLES, Types, Velocette**

Super-speed Venom [includes other models] *Motor Cycle*, 113 (15 Oct 64) p.698-700. il.

**MOTOR CYCLES, Types, Velocette Venom**

Velocette Venom. M. Evans. *Motor Cycle*, 113 (22 Oct 64) p.708-12. il.

**MOTOR CYCLES, Types, Velocette Venom, Conversions**

Well pepped. D. Dixon. *Motor Cycle*, 113 (2 Jul 64) p.174-5. il.

**MOTOR CYCLES, Types, Velocette Venom Special, Road tests**

499cc Velocette Venom Special. *Motor Cycle*, 112 (5 Mar 64) p.266-8. il.

**MOTOR CYCLES, Types, Velocette Viper Special, Road tests**

349cc Velocette 'Viper Special'. *Motor Cycling* (4 Mar 64) p.7. il.

**MOTOR CYCLES, Types, Velocette Vogue**

200cc Velocette 'Vogue'. *Motor Cycling* (18 Jul 64) p.5. il.

**MOTOR CYCLES, Types, Velocette Vogue, Road tests**

192 cc Velocette Vogue. *Motor Cycle*, 113 (1 Oct 64) p.616-18. il.

**MOTOR CYCLES, Types, Vincent Rapide, Conversions**

Continental express. *Motor Cycle*, 112 (13 Feb 64) p.192-4. il.

**MOTOR CYCLES, Types, Yamaha**

Pumping the oil. *Motor Cycle*, 113 (5 Nov 64) p.772-3. il.

**MOTOR CYCLES, Wheels, Spokes, Maintenance**

Spoke in your wheel. J. Ebbrell. *Motor Cycle*, 112 (30 Apr 64) p.536-7. il.

**MOTOR FUEL. See PETROL****MOTOR SHIPS. See SHIPS (Motor)****MOTOR VEHICLES**

Cars and commercial vehicles and motor cycles. Engineering, 197 (17 Jan 64) p.115-17. il.

Roads and traffic in 1984. Sir William Glanville. *New Scientist*, 22 (11 Jun 64) p.684

**MOTOR VEHICLES****Related Headings:**

AMBULANCES

MOTOR CARS

MOTOR COACHES

MOTOR CYCLES

SCOOTERS

TAXI-CABS

VANS

VEHICLES, Commercial

VEHICLES, Industrial



# **MOTOR VEHICLES—SUBHEADINGS—Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

History  
Research  
Problems  
    Breakdown  
    Accidents  
        Collisions  
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Properties  
    Dimensions  
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Technical activities  
    Design  
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Parts  
    Chassis  
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        Shock absorbers  
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        Gears  
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    Steering systems  
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    Wheels  
        Tyres  
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    Bodies  
    Trim  
    Upholstery  
    Engines  
        Petrol engines  
        Diesel engines  
        Gas turbines  
    Carburettors  
    Exhaust  
    Electrical equipment  
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    Spare parts

Performance  
    Braking  
    Hill climbing

Accessories  
    Safety belts

Types  
    Articulated  
    Steam  
    Refrigerated  
    Military

Ancillaries  
    Trailers  
    Service stations

## **MOTOR VEHICLES, Air compressors, Machining**

Medium-batch production of parts for twin-cylinder air compressors [Boultham Works of Clayton Dewandre Co., Ltd., Lincoln] A. W. Astrop. Machinery, 104 (17 Jun 64) p.1468-72. il.

## **MOTOR VEHICLES, Articulated**

Selecting artics to suit the load. W. H. Wilshire. Commercial Vehicles, 37 (Jan 64) p.52-4. il.

## **MOTOR VEHICLES, Articulated, Brakes**

Westinghouse shows systems and parts to meet new code. A. J. P. Wilding. Commercial Motor, 120 (4 Dec 64) p.69-70. il.

Where are we going on brakes? A. J. P. Wilding. Commercial Motor, 120 (16 Oct 64) p.82-3

## **MOTOR VEHICLES, Articulated, Brakes, Secondary**

Fodens tackle fade in secondary braking. J. B. Mills. Commercial Motor, 120 (27 Nov 64) p.50

## **MOTOR VEHICLES, Articulated, Driving, Education**

Time is ripe for crew training. R. D. Cater. Commercial Motor, 120 (6 Nov 64) p.74-5. il.

## **MOTOR VEHICLES, Articulated, Moving, Freight containers**

Transfer, Railway wagons. See FREIGHT, Containers, Moving, Railway wagons—Articulated vehicle transfer

## **MOTOR VEHICLES, Articulated, Operation**

Another look at articulation. S. Buckley. Commercial Motor, 119 (20 Mar 64) p.93-4

## **MOTOR VEHICLES, Articulated, Semi-trailers**

Customer calls the tune. R. D. Cater. Commercial Motor, 120 (2 Oct 64) p.108+. il.

New range of tandems from Taskers [Pedigree] A. J. P. Wilding. Commercial Motor, 119 (15 May 64) p.84-5. il.

## **MOTOR VEHICLES, Articulated, Semi-trailers, Dual purpose**

Goods-vehicles-cum tankers make progress. G. D. Jewell. Commercial Vehicles, 37 (Jan 64) p.71+. il.

## **MOTOR VEHICLES, Articulated, Semi-trailers, Springs, Leaf**

No hop or chatter [R.A. Dyson suspension] A. J. P. Wilding. Commercial Motor, 119 (27 Mar 64) p.39-40. il.  
Pitt tandem suspension. Automobile Engr., 54 (Jul 64) p.320-1. il.

## **MOTOR VEHICLES, Articulated, Tractive units**

Scammell introduces the Handyman III & Townsman. Transport World (Sep 64) p.54-5. il.

Show Atkinsons have Cummins and improved cab. Commercial Motor, 120 (4 Sep 64) p.75-7. il.

Two important introductions by Scammell [Handyman & Townsman] Commercial Motor, 120 (11 Sep 64) p.72+. il.

## **MOTOR VEHICLES, Articulated, Tractive units, Cabs**

Body design highlighted in super road train [Ford] Automotive Body Engng., 134 (Nov 64) p.16-17. il.

## **MOTOR VEHICLES, Articulated, Tractive units, Diesel engines, Differentially supercharged**

Experimental DDERF shows shape of things to come. B. R. Mathews. Commercial Vehicles, 38 (Nov 64) p.49-52. il.

## **MOTOR VEHICLES, Articulated, Transport, Beer. See**

BEER, Transport, Motor vehicles, Articulated

## **MOTOR VEHICLES, Articulated, Transport, Food. See**

FOOD, Transport, Motor vehicles, Articulated

## **MOTOR VEHICLES, Articulated, Types, Albion Chieftain**

Super Six—Scammell, Road tests  
Low on power—but game: road test: Albion Chieftain Super Six Scammell 18-ton-gross artic. J. F. Moon. Commercial Motor, 118 (3 Jan 64) p.50-3. il.

## **MOTOR VEHICLES, Articulated, Types, Commer CBEW**

1294—Hands, Road tests  
Lively and likeable outfit: road test: Commer-Hands 18-ton-gross artic. A. J. P. Wilding. Commercial Motor, 119 (26 Jun 64) p.64-7. il.

## **MOTOR VEHICLES, Articulated, Types, E.R.F. 64 CU**

180-2T—York EP20SR, Road tests  
24ton zest at 28tons gross. J. F. Moon. Transport World (Sep 64) p.60-2. il.

## **MOTOR VEHICLES, Accessories, Assembly**

Handling for short run production [Tudor Accessories Ltd., Hayes] P. M. Sanders. Mechanical Handling, 51 (Oct 64) p.595-9. il.

**MOTOR VEHICLES, Articulated, Types, E.R.F. 64 CU 180-2T—York Teamster EP20TA, Road tests**

Heavyweight hope from Sandbach. R. D. Cater. Commercial Motor, 120 (21 Aug 64) p.56+. il.

**MOTOR VEHICLES, Articulated, Types, E.R.F. 64GX3—Highway 1602R, Road tests**

Haulage outfit matches well. B. R. Mathews. Commercial Vehicles, 37 (Jan 64) p.33-6. il.

**MOTOR VEHICLES, Articulated, Types, Foden 8AE7/32—Dyson**

Four-axled load-carrying tractive unit...on Foden-Dyson five-axled artic. Commercial Motor, 120 (18 Sep 64) p.119+. il.

**MOTOR VEHICLES, Articulated, Types, Ford**

Experimental road train from Ford of U.S.A. Commercial Motor, 120 (30 Oct 64) p.21-2. il.

Ford turbine truck train. Automotive Design Engng., 3 (2 Dec 64) p.76-7. il.

From coast to coast by road with 75 tons [Ford road train] Engineering, 198 (13 Nov 64) p.617. il.

Gas turbine-powered express truck [Ford road train] Gas & Oil Power, 60 (Oct 64) p.260-1. il.

Prototype gas-turbine superhighway truck. Engineer, 218 (30 Oct 64) p.744-5. il.

75 tons at 70 m.p.h. is Ford plan for 1970s. Commercial Vehicles, 38 (Dec 64) p.44+. il.

**MOTOR VEHICLES, Articulated, Types, Guy Invincible 3—York EP17, Road tests**

Best Gardner fuel figures yet: road test: Guy-York 24-ton-gross artic. J. F. Moon. Commercial Motor, 119 (8 May 64) p.52+. il.

**MOTOR VEHICLES, Articulated, Types, Leyland Badger—Scammell Fourtrak, Road tests**

Low weight Leyland Badger carries over 16 tons cheaply and has a ready turn of speed as well. J. H. Fielder. Transport World (Dec 63) p.38+. il.

**MOTOR VEHICLES, Articulated, Types, Mercedes-Benz LPS 1620/30—Schenk Sa 16 100, Road tests**

Mercedes 32-ton artic excels. J. F. Moon. Commercial Motor, 119 (10 Apr 64) p.58+. il.

**MOTOR VEHICLES, Articulated, Types, Scammell Scarab 4—Scammell MH, Road tests**

Economical Scarab—with excellent brakes. R. D. Cater. Commercial Motor, 119 (31 Jul 64) p.50+. il.

Where the small articulated outfit scores. Transport J., 23 (14 Aug 64) p.122-4. il.

**MOTOR VEHICLES, Articulated, Tyres**

Super Singles promise doubled mileage: Bulmer's experience with Goodyears on a Foden-York outfit. J. F. Moon. Commercial Motor, 119 (26 Jun 64) p.57-8. il.

**MOTOR VEHICLES, Bodies, Aluminium, Production**

Producing aluminium for vehicle bodywork. G. F. Moseley. Automotive Body Engng., 133 (Mar 64) p.30-1

**MOTOR VEHICLES, Bodies, Fasteners**

Some modern and traditional fastenings for body engineering. Automotive Body Engng., 133 (Apr 64) p.10-12. il.

**MOTOR VEHICLES, Bodies, Paint**

Improved coatings for the motor industry. Paint J., 17 (Nov 64) p.481+

**MOTOR VEHICLES, Bodies, Paint, Acrylic**

Background to a new stage in paint technology. Automotive Body Engng., 132 (Dec 63) p.26-7. il.

**MOTOR VEHICLES, Bodies, Paint, Primers**

Primers and preparation in vehicle finishing (extract) J. H. Ousbey. Automotive Body Engng., 134 (Aug 64) p.31-3

**MOTOR VEHICLES, Bodies, Plastics, Reinforced—Glass fibre**

Reinforced plastics for vehicle bodywork. Automotive Body Engng., 133 (May 64) p.14-16. il.

Reinforced plastics for vehicle bodywork. Automotive Body Engng., 133 (Jun 64) p.20-3. il.

Reinforced plastics for vehicle bodywork. Automotive Body Engng., 134 (Jul 64) p.14-16. il.

Reinforced plastics in the Marshall Group of Companies. Reinforced Plastics, 8 (Dec 63) p.108-9. il.

Use of glass-fibre for body shells. R. B. Bassley. Automotive Body Engng., 132 (Dec 63) p.20-1. il.

**MOTOR VEHICLES, Bodies, Plastics, Reinforced—Glass fibre, Finishing**

Finishing techniques for reinforced plastic motor bodywork. R. B. Bassler & D. E. Carmante. Reinforced Plastics, 8 (Apr 64) p.242+. il.

**MOTOR VEHICLES, Bodies, Plastics, Reinforced, Press moulded**

Why not? Press moulded reinforced plastic for automotive body panels. J. Watt. Applied Plastics, 7 (Sep 64) p.46+. il.

**MOTOR VEHICLES, Bodies, Polishes**

Character of bodywork polishes. Automotive Body Engng., 133 (Jun 64) p.12-13

**MOTOR VEHICLES, Bodies, Wood chipboard**

Expanding uses for wood chipboard. Automotive Body Engng., 133 (Mar 64) p.14-15. il.

**MOTOR VEHICLES, Brakes**

Developments in vehicle braking design. S. F. Page. Design & Components in Engng. (27 Feb 64) p.12-15. il.

**MOTOR VEHICLES, Brakes, Drums, Iron, Cast**

Improved cast iron extends brake-drum life [Leyland Adlife] Foundry Trade J., 117 (16 Jul 64) p.81-2. il.

**MOTOR VEHICLES, Brakes, Hand**

Progressive leverage handbrakes. Automotive Design Engng., 3 (2 Dec 64) p.80. il.

**MOTOR VEHICLES, Brakes, Linings, Manufactures**

Ferodo, Ltd., Chapel-en-le-Frith. Chemistry & Industry (27 Jun 64) p.1150-1. il.

**MOTOR VEHICLES, Braking**

Work done by brakes. T. P. Newcomb. Automobile Engr., 54 (Mar 64) p.98-100. refs.

**MOTOR VEHICLES, Braking, Torque transfer**

Torque transfer in automotive brakes. D. Sinclair. Instn. of Mechanical Engrs. Proc. of the Automobile Div. no.8 (1962-63) p.263-70. il. refs.

**MOTOR VEHICLES, Breakdown (Tunnels) Removal, Fork trucks**

Lift truck serves as a tunnel vehicle breakdown recovery unit [Boss B.26] Mechanical Handling, 51 (Jun 64) p.406-7. il.

**MOTOR VEHICLES, Carburettors**

S.U. carburettor. P. G. G. Knight. Instn. of Mechanical Engrs. Auto Div. Proc., no.3 (1962-63) p.128-49. il.

**MOTOR VEHICLES, Carburettors, Compound**

Compound carburettors. G. O'Neill, A. Smithson & B. Oliver. Automotive Design Engng., 3 (Sep 64) p.58-9

**MOTOR VEHICLES, Carburettors, Testing**

Test techniques employed in the application of carburettors to vehicle engines. C. G. O'Neill. Instn. of Mechanical Engrs. Auto Div. Proc., no.3 (1962-63) p.113-27. il.

**MOTOR VEHICLES, Chassis, Frames, Stiffness, Torsion, Analysis, Matrices, Argyris method**

Using the Argyris method—a step-by-step explanation: data sheet 25. G. Tidbury. Automotive Design Engng., 3 (Sep 64) p.81+. il. refs.

**MOTOR VEHICLES, Cleansing, Roads. See ROADS, Cleansing, Vehicles**

**MOTOR VEHICLES, Collisions, Passenger body kinematics, Simulation**

Research into the safeguarding of passengers in vehicle accidents. L. C. Lundstrom, A. H. Kelly Jr. & D. J. LaBelle. *Engrs' Digest*, 25 (Jul 64) p.85-9. il.

Crash research for vehicle safety (summary) L. C. Lundstrom, A. H. Kelly Jr. & D. J. LaBelle. *Automotive Body Engng.*, 134 (Aug 64) p.22-4. il.

**MOTOR VEHICLES, Design**

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**MOTOR VEHICLES, Diesel engines**

Case for the V engine. P. A. C. Brockington. *Commercial Motor*, 118 (31 Jan 64) p.66. il.

Cummins diesel international based in London. *Gas & Oil Power*, 60 (Jun 64) p.148-9. il.

Future of lightweight high-speed diesel engines in the automotive and agricultural fields. J. G. Dawson & N. M. F. Vulliamy. *Proc. of Instn. of Mechanical Engrs.*, 177 no.38 (1963) p.1046-54. il. refs.

**MOTOR VEHICLES, Diesel engines, Combustion, Air flow**

Air swirl in a road-vehicle diesel engine. D. Fitzgeorge & J. L. Allison. *Instn. of Mechanical Engrs. Auto Div. Proc.*, no.4 (1962-63) p.151-77. il. refs.

**MOTOR VEHICLES, Diesel engines, Direct injection**

Mercedes-Benz direct-injection engines: important design change in automotive engines. *Gas & Oil Power*, 60 (May 64) p.116-17. il.

**MOTOR VEHICLES, Diesel engines, Exhaust**

No smoke without fire. *Transport World* (Jan 64) p.19  
Smoke from diesel-engined road vehicles. A. E. Dodd, R. A. C. Fosberry, L. E. Reed & S. C. Wallin. *Engineer*, 218 (23 Oct 64) p.660-1. il. refs.

**MOTOR VEHICLES, Diesel engines, Fuel, Contamination**

Contamination of diesel fuel by solids. G. Onion. *Oil Engine & Gas Turbine*, 32 (Jul 64) p.32-4. il. refs.

**MOTOR VEHICLES, Diesel engines, Turbochargers**

Turbocharging for small engines (summary) I. W. Goodlet. *Commercial Motor*, 118 (27 Dec 63) p.38+. il.

**MOTOR VEHICLES, Dimensions**

New weights for new vehicles: not much for existing units in latest regulations. *Commercial Motor*, 120 (7 Aug 64) p.42-3. il.

Revised maximum dimensions for U.K. road vehicles imposed by Construction and Use regulations: data sheet 26. *Automotive Design Engng.*, 3 (Oct 64) p.97-8. il.

**MOTOR VEHICLES, Drivers, Blood alcohol level, Determination, Breath analysis**

Breath of a drunken driver. P. Stubbs. *New Scientist*, 21 (9 Jan 64) p.75

**MOTOR VEHICLES, Driving, Safety, Investigations, Photography**

Operation Fotostrada. G. Borgeson. *Motor* (15 Jul 64) p.19-21. il.

**MOTOR VEHICLES, Electrical equipment, Components, Extrusion, Cold**

Cold-formed components for motor vehicles electrical accessories. V. Boetz. *Machinery*, 104 (1 Jan 64) p.28-30. il.

**MOTOR VEHICLES, Electrical equipment, Manufactures, Mechanical handling equipment**

Work-handling in the production of equipment for motor vehicles [Dunstable works of the AC-Delco Division of General Motors, Ltd] A. J. Barker. *Machinery*, 104 (8 Jan 64) p.60-7. il.

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Brief survey of cylinder liner, piston and ring technique. G. W. Yarwood. *J. & Proc. of Inst. of Road Transport Engrs.*, 17 (Dec 63) p.85+. il.

Combustion fundamentals: the basic thermodynamic limitations on increased efficiency and output. W. T. Lyn. *Automotive Design Engng.*, 3 (Jul 64) p.54-8. il. refs.

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Contribution to the study of deterioration in automobile engine cams and tappets. R. Cazaud, M. Renout & C. Daubertes. *Instn. of Mechanical Engrs. Auto Div. Proc.*, no.2 (1962-63) p.93-111. il. refs.

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Production of Ford engine components: methods adopted for machining camshafts at rates up to 1800 per shift at the Lima, Ohio, factory of Ford Motor Company. *Machinery*, 105 (9 Dec 64) p.1348-56. il.

**MOTOR VEHICLES, Engines, Components, Casting**

Progress towards automatic foundries and finishing plants [Associated Engineering Group] *Control*, 8 (Jan 64) p.47-8. il.

**MOTOR VEHICLES, Engines, Components, Casting, Mechanical handling**

Economy of effort in modern foundry [British Piston Ring Co. Ltd.] H. G. Vallings. *Mechanical Handling*, 51 (Nov 64) p.662-6. il.

**MOTOR VEHICLES, Engines, Cylinders, Aluminium**

Cross aluminium cylinder. R. C. Cross. *Automobile Engr.*, 54 (Apr 64) p.135-9. il.

Cross aluminium cylinder, pt.2: aluminium producer's viewpoint and notes on a practical test in an engine. G. W. Meredith. *Automobile Engr.*, 54 (May 64) p.190-1. il.

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Chrysler Corporation are confirmed users of tin in cast iron. *Tin & Its Uses* no.63 (1964) p.1-2. il.

Tin addition in cast iron for grey-iron castings. *Steel Times*, 189 (24 Jul 64) p.142-3. refs.

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Beating fuel tank corrosion. *Product Finishing*, 17 (Jan 64) p.83-4. il.

Ford Motor's answer to fuel tank corrosion. *Corrosion Prevention & Control*, 11 (Mar 64) p.26-7. il.

Protecting Ford fuel tanks against corrosion [Petrol Tank Lacquer] *Corrosion Technology*, 11 (Mar 64) p.32-3. il.

**MOTOR VEHICLES, Engines, Lubricating oils, Viscosity, Winter conditions**

Oil viscosity as a factor in cold starting. E. G. Ellis. *Scientific Lubrication*, 16 (Aug 64) p.24-9. il. refs.

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Motor vehicle noise and vibration: summary of "Noise due to combustion in reciprocating internal combustion engines" T. Priede. *Engineer*, 218 (17 Jul 64) p.91-2. il.

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Elasticity: an engine flexibility parameter. B. Firth. *Automotive Design Engng.*, 3 (Nov 64) p.90+. il.

**MOTOR VEHICLES, Engines, Tappets, Wear**

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**MOTOR VEHICLES, Exhaust, Air pollution. See AIR POLLUTION, Motor vehicles, Exhaust****MOTOR VEHICLES, Exhaust, Purification, Afterburners**

Development and test data of the Lucas direct flame afterburner. J. S. Clarke & J. P. Soltau. *Instn. of Mechanical Engrs. Proc. of the Automobile Div. no.7 (1962-63) p.228* 41. il. refs.



**MOTOR VEHICLES, Exhaust, Purification, Catalytic**

Catalytic purification of car exhausts. D. De Rycke. *Instrn. of Mechanical Engrs. Proc. of the Automobile Div.* no.7 (1962-63) p.220-7. il. refs.

**MOTOR VEHICLES, Garages. See GARAGES****MOTOR VEHICLES, Gas turbines**

Ford's type 704 vehicle gas turbine. *Gas & Oil Power*, 60 (Jan 64) p.2-3. il.

**MOTOR VEHICLES, Gearboxes**

New multi-ratio transmission system [Eaton Manufacturing Co. RT910 & RT915] *Transport J.*, 22 (10 Jan 64) p.34-5. il.

Ten-and fifteen-speed automotive gear-boxes. *Engineer*, 217 (10 Jan 64) p.80. il.

**MOTOR VEHICLES, Gears, Synchromesh**

Advance in heavy-duty synchromesh design [Smiths Motor Accessory Division] *Commercial Motor*, 120 (7 Aug 64) p.34-5. il.

**MOTOR VEHICLES, Hill climbing**

Gradient ability by a graphical method: data sheet 23. S. Goldschmidt & E. Hadar. *Automotive Design Engrng.*, 3 (Jul 64) p.65-6. il.

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From headline news to accepted practice: address by the chairman of the Automobile Division. H. A. Dean. *Instrn. of Mechanical Engrs. Proc. of the Automobile Div.* (1962-63) p.1-22. il.

**MOTOR VEHICLES, Industrial refuse collection. See**

REFUSE, Industrial, Collection, Vehicles

**MOTOR VEHICLES, Manufactures**

Story of Ford of Britain. *Transport J.*, 23 (11 Sep 64) p.258-68. il.

**MOTOR VEHICLES, Manufactures, Research, Computers**

Ford's digital computer. *Automobile Engrng.*, 54 (May 64) p.186-8. il.

**MOTOR VEHICLES, Military**

Related Headings:

PERSONNEL CARRIERS, Armoured

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Test results of tracklayer performance: fundamental data obtained from medium-weight high-speed military vehicles: extracts from "Factors affecting the performance of high speed tracklayers". G. V. Cleare. *Automotive Design Engrng.*, 3 (Sep 64) p.96-7. il.

**MOTOR VEHICLES, Municipal sanitation. (See SANITATION, Municipal, Motor vehicles****MOTOR VEHICLES, Parts, Aluminium alloys**

Selecting aluminium alloys. E. Elliott. *Automotive Design Engrng.*, 3 (2 Dec 64) p.61-4. il. refs.

**MOTOR VEHICLES, Parts, Aluminium alloys, Wrought**

Wrought aluminium alloys: data sheet 28. *Automotive Design Engrng.*, 3 (2 Dec 64) p.65-6. il.

**MOTOR VEHICLES, Parts, Finishing**

Finishing on the production line: electrophoresis, spray painting and chemical blackening at AC-Delco works. *Industrial Finishing*, 16 (Sep 64) p.40-1. il.

**MOTOR VEHICLES, Parts, Linkage mechanisms**

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ART GALLERIES, Lincoln (Nebraska)

**NECKING, Tensile tests, Copper. See COPPER, Tensile tests, Necking****NEDERLANDS INSTITUUT Voor ZUIVELONDERZOEK**

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Related Headings:

CHLOROBROMOPROPENE

**NEMATODES. See EELWORMS****NENK SYSTEM, Prefabricated buildings. See BUILDINGS, Prefabricated, Nenk system****NENK SYSTEM, Prefabricated military buildings. See MILITARY BUILDINGS, Prefabricated, Nenk system****NEOCHLOROGENIC ACID, Lactones**

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BRICKS, Manufactures, Netherlands

BUILDING, Netherlands

BUSES, Transport, Arnhem

BUSES, Transport, Netherlands

CANALS, Operation, Netherlands

CHEMICAL TECHNOLOGY, Rotterdam

CHEMISTRY, Education, Netherlands

COASTAL WORKS, Netherlands

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DAIRY INDUSTRY, Research, Netherlands

FERTILISERS, Nitrogen, Production, Netherlands

FOOD, Packaging, Netherlands

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GAS, Natural, Pipelines, Netherlands

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## NETHERLANDS

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GLASS, Stippling, Netherlands

K.E.M.A. LABORATORIES, Netherlands

KONINKLIJKE/SHELL LABORATORIUM, Amsterdam

NEDERLANDS INSTITUUT VOOR ZUIVELONDER-  
ZOEK

PETROLEUM, Refineries, Rotterdam

PHILIPS RESEARCH LABORATORIES, Eindhoven

PLASTICS RESEARCH INSTITUTE T.N.O., Delft

PORTS, Rotterdam

RAILWAYS, Underground, Rotterdam

ROADS, Town planning, Amsterdam

SHIPBUILDING, Netherlands

TRAMCARS, The Hague

TRAMWAYS, The Hague

TRAMWAYS, Netherlands

TUNNELS, Netherlands

VEZELINSTITUUT T.N.O., Laboratories, Delft

WOOL, Industry, Netherlands

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NETWORKS, Electrical, Analogues, Rigid frames, Structures. See STRUCTURES, Frames, Rigid, Analogues, Electrical networks

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**NEUTRONS, Diffusion, Sintered beryllia, Beryllia moderated nuclear reactors.** See **NUCLEAR REACTORS, Beryllia moderated, Beryllia, Sintered, Neutron diffusion**

**NEUTRONS, Diffusion, Uniform power nuclear reactors.** See **NUCLEAR REACTORS, Uniform power, Neutron diffusion**

**NEUTRONS, Diffusion, Water moderated nuclear reactors.** See **NUCLEAR REACTORS, Water moderated, Neutron diffusion**

**NEUTRONS, Fast, Cross section, Oxygen.** See **OXYGEN, Fast neutron cross section**

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**NEUTRONS, Fission cross section, Uranium 235.** See **URANIUM 235, Nuclei, Fission, Cross section, Neutrons**

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**NEUTRONS, Irradiated single crystals, Copper alloys.** See **COPPER, Alloys, Crystals, Single, Irradiated, Neutrons**

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**NEUTRONS, Irradiation, Effect on elastic moduli, Single crystals, Graphite.** See **GRAPHITE, Crystals, Single, Elastic moduli, Effect of neutron irradiation**

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**NEUTRONS, Moisture meters.** See **MOISTURE, Meters, Neutron**

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NEW HAVEN

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**NICKEL, Cathodes.** See **CATHODES, Nickel****NICKEL, Creep, Effect of gold**

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See **DISCS, Sound records, Stampers, Electroplating, Nickel**

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**NICKEL-BASE ELECTRODES, Welding, Cryogenics, Steel.**

See **STEEL, Cryogenics, Welding, Electrodes, Nickel-base**

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**NICKEL-CHROMIUM, Electroplating.** See **ELECTROPLATING, Nickel-Chromium**

**NICKEL-CHROMIUM, Electroplating, Bicycle components.** See **BICYCLES, Components, Electroplating, Nickel-Chromium**

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**NICKEL-COPPER, Stripping columns, Mercaptan extraction, Petroleum.** See **MERCAPTANS, Extraction, Petroleum, Stripping, Columns, Nickel-Copper**

**NICKEL-COPPER, Tubes, Heat exchangers, Purse seiners, Anchovies.** See **ANCHOVIES, Seiners, Purse, Heat exchangers, Tubes, Copper-Nickel**

**NICKEL-COPPER-COBALT, Electroplating.** See **ELECTROPLATING, Cobalt-Copper-Nickel alloy**

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- NIP PRESSURE**, Presses, Papermaking. See PAPER-MAKING, Presses, Nip pressure
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- NITROFURAZONE**, Additives, Determination, Animal feedingstuffs. See ANIMAL FEEDINGSTUFFS, Additives, Nitrofurazone, Determination
- NITROGEN**, Clean-up, Sorption pumps, Vacuum. See VACUUM, Pumps (Sorption) Nitrogen clean-up
- NITROGEN**, Compounds, Feedwater treatment, Boilers. See BOILERS, Feedwater, Treatment, Nitrogen compounds

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NEUTRONS, Fast, Industrial health, Monitors  
NUCLEAR EMULSIONS  
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**NUCLEAR REACTORS**

Related Headings:

SUB-CRITICAL ASSEMBLIES

**NUCLEAR REACTORS—SUBHEADINGS—Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

Particular countries

*Great Britain*

*France*

Problems

*Safety*

*Wastes*

*Corrosion*

Reactor physics

*Dynamics*

*Neutrons*

*Flattened zones*

*Uniform power*

*Neutron diffusion*

*Sub-critical reactivity*

Chemistry

Operation

*Temperature control*

Components

*Structures*

*Pressure vessels*

*Shielding*

*Pipes*

*Standpipes*

*Control systems*

*Control rods*

*Cooling systems*

*Cores*

*Fuel elements*

*Fuels*

*Materials*

*Nickel alloys*

*Graphite*

**NUCLEAR REACTORS—SUBHEADINGS—Synopsis—cont.**

Types of reactors

By can, moderator or coolant material

*Magnox*

*Boiling water*

*Pressurised water*

*Water moderated*

*Heavy water moderated*

*Beryllia moderated*

*Beryllium moderated*

*Gas cooled*

*Helium cooled*

*Water cooled*

*Swimming pool*

*Liquid metal cooled*

*Mercury cooled*

*Square lattice cell*

*Pressure tube*

*Reflected*

*Homogeneous*

*Fast*

*(Research)*

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**NUCLEAR REACTORS, Boiling water, Propulsion, Ships. See SHIPS, Nuclear propulsion, Reactors, Boiling water****NUCLEAR REACTORS, Boiling water, Wastes, Gases, Adsorption**

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BOARD ROOMS  
BUSINESS MACHINES, Housing

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**OFFSET LITHOGRAPHY, Printing, Charts, Navigation, Ships.** See SHIPS, Navigation, Charts, Printing, Lithography, Offset

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- OSCILLATIONS**, Coupled circuits. See **CIRCUITS**, Electric, Coupled, Oscillations
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See

**TOWN PLANNING, Osterley Park****OTTER SHORT TAKE-OFF AIRCRAFT. See AIRCRAFT,****Short take-off, Types, De Havilland (Canada) Twin Otter****OTUD, J. J. P.**Finding Otud. E. Ambrose. *Builder*, 206 (10 Apr 64) p.756-8. il.**OUTBOARD DIESEL ENGINES, Motor boats. See BOATS,****Motor, Diesel engines, Outboard****OUTBOARD ENGINES, Fishing vessels. See FISHING,****Vessels, Engines, Outboard****OUTERWEAR**

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**OWEN-KLEINE SYSTEM, Prefabricated buildings. See BUILDINGS, Prefabricated, Owen-Kleine system****OWEN KLEINE SYSTEM, Prefabrication, Flats. See FLATS, Prefabrication, Owen Kleine system****OXALIC ACID, Oxidation, Platinum platinised anodes. See ANODES, Platinum, Platinised, Oxalic acid oxidation****OXFORD**

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TOWN PLANNING, Oxford

WATER, Engineering, Oxford

**OXFORD. UNIVERSITY. Brasenose College. See**

BRASENOSE COLLEGE, Oxford

**OXFORD. UNIVERSITY. Christ Church College. See**

CHRIST CHURCH COLLEGE, Oxford

**OXFORD. UNIVERSITY. St. Catherine's College. See ST.**

CATHERINE'S COLLEGE, Oxford

**OXIDASES, Polyphenols, Stored flush, Tea. See TEA, Flush, Stored, Polyphenol oxidases****OXIDATION**

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AUTOXIDATION

SCALE

**OXIDATION, Alcohols, Platinum anodes. See ANODES, Platinum, Alcohol oxidation****OXIDATION, Aldehydes, Platinum anodes. See ANODES, Platinum, Aldehyde oxidation****OXIDATION, Aluminium. See ALUMINIUM, Oxidation****OXIDATION, Aqueous solutions, Organic chemicals. See ORGANIC CHEMICALS, Solutions, Aqueous, Oxidation****OXIDATION, Asphalt. See ASPHALT, Oxidation****OXIDATION, Boric acid-Formamide solutions, Aluminium anodes. See ANODES, Aluminium, Boric acid-Formamide solutions, Oxidation****OXIDATION, Cadmium amalgam anodes. See ANODES, Cadmium amalgam, Oxidation****OXIDATION, Carbon, Oxygen process, Steel-Chromium-Nickel production. See STEEL-CHROMIUM-NICKEL, Production, Oxygen process, Carbon oxidation****OXIDATION, Carbon, Oxygen process, Steel-Chromium production. See STEEL-CHROMIUM, Production, Oxygen process, Carbon oxidation****OXIDATION, Carbon determination, Cast iron. See IRON, Cast, Determination of carbon, Oxidation****OXIDATION, Carbon determination, Mild steel. See STEEL, Mild, Determination of carbon, Oxidation****OXIDATION, Chloride ions, Hydrochloric acid-Sulphuric acid solutions, Platinum anodes. See ANODES, Platinum, Hydrochloric acid-Sulphuric acid solutions, Chloride ions, Oxidation****OXIDATION, Coal. See COAL, Oxidation****OXIDATION, Copper-Silicon. See COPPER-SILICON, Oxidation****OXIDATION, Cyanides, Effluents, Finishing, Metals. See METALS, Finishing, Effluents, Cyanides, Oxidation****OXIDATION, Effect on air reactivity, Graphite, Nuclear reactors. See NUCLEAR REACTORS, Graphite, Reactivity (Air) Effect of oxidation****OXIDATION, Effect on expansion, Single crystals, Magnesio-wustite. See MAGNESIO-WUSTITE, Crystals, Single, Expansion, Effect of oxidation****OXIDATION, Effluents, Town gas production. See GAS (Town) Production, Effluents, Oxidation****OXIDATION, Ethylene glycol dioleate. See ETHYLENE GLYCOL DIOLEATE, Oxidation****OXIDATION, Formic acid, Sulphuric acid solutions, Platinised platinum anodes. See ANODES, Platinum, Platinised, Sulphuric acid solutions, Formic acid oxidation****OXIDATION, Fused silica. See SILICA, Fused, Oxidation****OXIDATION, Gaseous, Hydrocarbons. See HYDROCARBONS, Oxidation, Gaseous****OXIDATION, Glycine. See GLYCINE, Oxidation****OXIDATION, Graphite. See GRAPHITE, Oxidation****OXIDATION, Hydroxylamine. See HYDROXYLAMINE, Oxidation****OXIDATION, Intermetallic compounds, Aluminium-Uranium. See ALUMINIUM-URANIUM, Intermetallic compounds, Oxidation****OXIDATION, Iron. See IRON, Oxidation****OXIDATION, Iron-Chromium. See IRON-CHROMIUM, Oxidation****OXIDATION, Isoquinoline, Phthalimide production. See PHTHALIMIDE, Production, Isoquinoline, Oxidation****OXIDATION, Lubricating oils. See LUBRICATING OILS, Oxidation**

- OXIDATION, Metals. See METALS, Oxidation
- OXIDATION, Methane. See METHANE, Oxidation
- OXIDATION, Methane, Formaldehyde production. See FORMALDEHYDE, Production, Methane, Oxidation
- OXIDATION, Methyl alcohol, Perchloric acid solutions, Platinum anodes. See ANODES, Platinum, Perchloric acid solutions, Methanol, Oxidation
- OXIDATION, Methyl alcohol, Sulphuric acid solutions, Platinised platinum anodes. See ANODES, Platinum, Platinised, Sulphuric acid solutions, Methyl alcohol oxidation
- OXIDATION, Niobium. See NIOBIUM, Oxidation
- OXIDATION, Organic chemicals. See ORGANIC CHEMICALS, Oxidation
- OXIDATION, Organic chemicals electrolytes, Rotating anodes, Platinum. See ANODES, Platinum, Rotating, Organic electrolytes, Oxidation
- OXIDATION, Oxalic acid, Platinum platinised anodes. See ANODES, Platinum, Platinised, Oxalic acid oxidation
- OXIDATION, Passivated oil, Transformers. See TRANSFORMERS, Oil, Passivated, Oxidation
- OXIDATION, Petrol. See PETROL, Oxidation
- OXIDATION, Photochemical, Bitumen. See BITUMEN, Oxidation, Photochemical
- OXIDATION, Platinum anodes. See ANODES, Platinum, Oxidation
- OXIDATION, Polypropylene. See POLYPROPYLENE, Oxidation
- OXIDATION, Porous graphite, Pipes. See PIPES, Graphite, Porous, Oxidation
- OXIDATION, Potassium dichromate, Biochemical oxygen demand determination, Pollution, Water. See WATER, Pollution, Biochemical oxygen demand, Determination, Potassium dichromate oxidation
- OXIDATION, Sewage treatment. See SEWAGE, Treatment, Oxidation
- OXIDATION, Stainless steel. See STEEL, Stainless, Oxidation
- OXIDATION, Synthetic coal. See COAL, Synthetic, Oxidation
- OXIDATION, Tantalum. See TANTALUM, Oxidation
- OXIDATION, Thermal, Polyolefines. See POLYOLEFINES, Oxidation, Thermal
- OXIDATION, Thiol groups, Dough, Flour. See FLOUR, Dough, Thiol groups, Oxidation
- OXIDATION, Vapour, *n*-Pentane. See *n*-PENTANE, Vapour, Oxidation
- OXIDATION, Wool. See WOOL, Oxidation
- OXIDATION, Xylenes, Phthalic acid production. See PHTHALIC ACID, Production, Xylenes, Oxidation
- OXIDATION CAPACITY, Manganese ores. See MANGANESE, Ores, Oxidation capacity
- OXIDATION-REDUCTION, Aqueous solutions, Platinum electrodes. See ELECTRODES, Platinum, Aqueous solutions, Oxidation-Reduction
- OXIDATION-REDUCTION, Cyclic compounds. See CYCLIC COMPOUNDS, Oxidation-Reduction
- OXIDATION-REDUCTION, Platinum chloride, Hydrochloric acid-Sulphuric acid, Solutions, Platinum anodes. See ANODES, Platinum, Hydrochloric acid-Sulphuric acid solutions, Platinum chloride, Oxidation-reduction
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- OXIDE COATED CATHODES, Gas discharge. See GAS DISCHARGE, Cathodes, Oxide coated
- OXIDE PURIFIERS, Hydrogen sulphide removal, Town gas. See GAS (Town) Purification, Hydrogen sulphide removal, Oxide purifiers
- OXIDES, Determination, Lead. See LEAD, Determination of oxide
- OXIDES, Dispersion alloys. See ALLOYS (Dispersion)
- OXIDES, Inclusions, Aluminium alloys, Plates. See PLATES, Aluminium alloys, Inclusions, Oxides
- OXIDES, Refractory, Reactions with refractory metals. See METALS, Refractory, Reactions with refractory oxides
- OXIDISED LEAD, Anodes. See ANODES, Lead, Oxidised
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- OXIDISING ATMOSPHERES, Quenching, Gold. See GOLD, Quenching, Oxidising atmospheres
- OXIRANE. See ETHYLENE OXIDE
- OXY-ARC FLAME CUTTING. See FLAME CUTTING, Oxy-arc
- OXY-GAS FLAME CUTTING. See FLAME CUTTING, Oxy-gas
- OXYGEN  
Related Headings:  
OZONE
- OXYGEN, Adsorption, Effect on photoconductivity, Cadmium sulphide. See CADMIUM SULPHIDE, Photoconductivity, Effect of oxygen adsorption
- OXYGEN, Adsorption, Sodium sulphate solutions, Gold electrodes. See ELECTRODES, Gold, Sodium sulphate solutions, Oxygen adsorption
- OXYGEN, Adsorption, Vacuum deposited uranium films. See FILMS, Uranium, Vacuum deposited, Adsorption, Oxygen
- OXYGEN, Aids, Flying. See FLYING, Oxygen aids
- OXYGEN, Ashing, Organic materials. See ORGANIC MATERIALS, Ashing, Oxygen
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- OXYGEN, Effect on crystallisation, Fused silica. See SILICA, Fused, Crystallisation, Effect of oxygen
- OXYGEN, Effect on light fastness, Azo dyes. See AZO COMPOUNDS, Dyes, Light fastness, Effect of oxygen
- OXYGEN, Effect on phase equilibria, Uranium carbide-Graphite, Fuels, Nuclear reactors. See NUCLEAR REACTORS, Fuels, Uranium carbide-Graphite, Phase equilibria, Effect of oxygen
- OXYGEN, Effect on xanthates, Collectors, Flotation, Galena. See GALENA, Flotation, Collectors, Xanthates, Effect of oxygen
- OXYGEN, Evolution, Decomposition determination, Hydrogen peroxide. See HYDROGEN PEROXIDE, Decomposition, Determination, Oxygen, Evolution
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- OXYGEN, Injection, Arc furnaces, Steel production. See STEEL, Production, Furnaces, Arc, Oxygen, Injection
- OXYGEN, Labelled organic chemicals. See ORGANIC CHEMICALS, Labelled, Oxygen
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- OXYGEN, Reduction, Potassium hydroxide-Hydrogen peroxide solutions, Rotating discs, Carbon cathodes. See CATHODES, Carbon, Rotating disc, Potassium hydroxide-Hydrogen peroxide solutions, Oxygen reduction
- OXYGEN, Reduction, Rotating discs, Platinum cathodes. See CATHODES, Platinum, Rotating disc, Oxygen, Reduction
- OXYGEN, Resuscitation. See RESUSCITATION, Oxygen
- OXYGEN, Shock tubes. See SHOCK TUBES, Oxygen
- OXYGEN, Sorption, Tantalum filaments, Ionisation gauges. See IONISATION GAUGES, Filaments, Tantalum, Oxygen sorption
- OXYGEN, Sorption, Tungsten filaments, Ionisation gauges. See IONISATION GAUGES, Filaments, Tungsten, Oxygen sorption
- OXYGEN, Sulphuric acid solutions, Oxidised lead anodes. See ANODES, Lead, Oxidised, Sulphuric acid solutions, Oxygen
- OXYGEN, Vacancies, Effect on saturation magnetisation, Nickel ferrites. See NICKEL FERRITES, Magnetisation, Saturation, Effect of oxygen vacancies
- OXYGEN-AMMONIA, Flames. See FLAMES, Ammonia-Oxygen
- OXYGEN-ARGON-NITROGEN. See ARGON-NITROGEN-OXYGEN
- OXYGEN-DIMETHYL HYDRAZINE FLAMES. See FLAMES, Dimethyl hydrazine-Oxygen
- OXYGEN-FLASK, Analysis, Phosphorus determination, Coke. See COKE, Determination of phosphorus, Oxygen-flask technique
- OXYGEN-FUEL, Burners, Arc furnaces, Steel production. See STEEL, Production, Furnaces, Arc, Burners, Fuel-Oxygen
- OXYGEN-FUEL, Burners, Furnaces, Steel production. See STEEL, Production, Furnaces, Burners, Fuel-Oxygen
- OXYGEN-FUEL, Steel production. See STEEL, Production, Oxygen-Fuel
- OXYGEN-FUEL OIL. See FUEL OIL-OXYGEN
- OXYGEN-FUEL-SCRAP PROCESS, Steel production. See STEEL, Production, Fuel-Oxygen-Scrap process
- OXYGEN-GOLD, Anodes. See ANODES, Gold-Oxygen
- OXYGEN-HYDROGEN, Flames. See FLAMES, Hydrogen-Oxygen
- OXYGEN-HYDROGEN, Liquid. See HYDROGEN-OXYGEN, Liquid
- OXYGEN-HYDROGEN, Liquid, Fuels, Rockets. See ROCKETS, Liquid hydrogen-oxygen fuelled
- OXYGEN-HYDROGEN FUEL CELLS. See FUEL CELLS, Hydrogen-Oxygen
- OXYGEN-HYDROGEN-NITROGEN FLAMES. See FLAMES, Hydrogen-Oxygen-Nitrogen
- OXYGEN-OIL BURNERS, Arc furnaces, Steel production. See STEEL, Production, Furnaces, Arc, Burners, Oil-Oxygen
- OXYGEN-PLATINUM, Anodes. See ANODES, Platinum-Oxygen
- OXYGEN-PLATINUM, Electrodes. See ELECTRODES, Platinum-Oxygen
- OXYGEN PROCESS, Steel-Chromium-Nickel production. See STEEL-CHROMIUM-NICKEL, Production, Oxygen process
- OXYGEN PROCESS, Steel-Chromium production. See STEEL-CHROMIUM, Production, Oxygen process
- OXYGEN PROCESS, Steel production. See STEEL, Production, Oxygen process
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- OXYGEN-PROPANE, Lances, Direct reduction, Iron production. See IRON, Production, Direct reduction, Oxygen-propane lances
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- P.V.C., Coatings, Steel. See STEEL, Coatings, P.V.C.
- P.V.C., Coatings, Steel, Sheets. See SHEETS, Steel, Coatings, P.V.C.
- P.V.C., Coatings, Steel, Sheets, Panels, Buildings. See BUILDINGS, Panels, Sheets, Steel, Coatings, P.V.C.
- P.V.C., Coatings, Steel, Strips. See STRIPS, Steel, Coating, P.V.C.
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- P.V.C., Powders, Coatings, Steel, Strips. See STRIPS, Steel, Coating, Powders, P.V.C.
- P.V.C., Rainwater goods. See RAINWATER GOODS, P.V.C.

P.V.C., Roofing. See ROOFING, P.V.C.  
 P.V.C., Sacks. See SACKS, P.V.C.  
 P.V.C., Sheets. See SHEETS, P.V.C.  
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 PACEMAKERS, Heart. See HEART, Stimulators, Oscillators, Blocking, Transistor  
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 PACKAGE DYEING, Elastic polyurethane yarns. See YARNS, Polyurethane, Elastic, Dyeing, Package  
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 PACKAGED DEALS, Building. See BUILDING, Contracts, Packaged deals  
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 PACKAGES, Cotton yarns. See YARNS, Cotton, Packages  
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**PACKAGING**

Related Headings:

ALUMINIUM, Packaging materials  
 BOTTLING  
 CANNING  
 CELLULOSE ACETATE, Packaging materials  
 CONTAINERS  
 ENCAPSULATION  
 FILM, P.V.C., Packaging materials  
 FILM, Plastics, Packaging materials  
 FILM, Polypropylene, Oriented, Packaging materials  
 FILM, Polythene, Packaging materials

**PACKAGING**

Related Headings—cont.

FILM, Thermoplastics, Shrinkable, Packaging materials  
 FOIL, Aluminium, Packaging  
 FOOD, Labels  
 GLASS, Packaging materials  
 HAIR FIBRES, Bonding, Latex, Flame resistant, Packaging materials  
 LABELS  
 MESH, Thermoplastics, Packaging materials  
 PARCELS  
 PLASTICS, Expanded, Packaging materials  
 RUBBER, Packaging materials  
 THERMOPLASTICS, Metal ion linked, Packaging materials  
 THERMOPLASTICS, Packaging materials  
 TINPLATE, Packaging materials  
 WIRE-STITCHING MACHINES

**PACKAGING—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

Awards  
 Standards  
 Costs

Plant & Equipment  
 Machines

Processes  
 Design  
 Cushioning

Labelling

Materials  
 Strapping  
 Adhesives  
 Papers

Types of package  
 Cases  
 Tubes

**PACKAGING, Adhesives**

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PACKAGING, Aerosols. See AEROSOLS, Packaging  
 PACKAGING, Ampoules. See AMPOULES, Packaging

PACKAGING, Animal feedingstuff manufactures. See ANIMAL FEEDINGSTUFFS, Manufactures, Packaging  
 PACKAGING, Apples. See APPLES, Packaging

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PACKAGING, Bacon. See BACON, Packaging  
 PACKAGING, Bottles. See BOTTLES, Packaging  
 PACKAGING, Bulk, Food. See FOOD, Packaging, Bulk  
 PACKAGING, Butter. See BUTTER, Packaging

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Heavy-duty corrugated cases. Packaging, 34 (Dec 63) p.48-51. il.

Merchandise packing and conveying. F. T. Day. Mass Production, 40 (Feb 64) p.40-4. il.

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**PACKAGING, Cases, Fibre board, Manufactures, Machines**

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**PACKAGING, Materials, Printing, Dry offset**

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**PACKAGING, Papers, Release, Coatings, Silicones**

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**PACKAGING, Poultry.** See **POULTRY, Packaging**

**PACKAGING, Perfumes.** See **PERFUMES, Packaging**

**PACKAGING, Sculpture.** See **SCULPTURE, Packaging**

**PACKAGING, Solid fuels.** See **FUELS, Solid, Packaging**

**PACKAGING, Standards**

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**PACKAGING, Tea.** See **TEA, Packaging**

**PACKAGING, Thermoplastic film.** See **FILM, Thermoplastics, Packaging**

**PACKAGING, Toys.** See **TOYS, Packaging**

**PACKAGING, Tubes, Plastic**

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**PACKAGING, Vegetables.** See **VEGETABLES, Packaging**

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**PACKED COLUMNS, Loading region, Pressure drop**

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**PACKING, Close, Spheres.** See **SPHERES, Close packing**

**PACKING, Dumped, Packed columns.** See **PACKED**

**COLUMNS, Packing, Dumped**

**PACKING, Gas, Containers, Food.** See **FOOD, Containers, Gas packing**

**PACKING, Packed columns.** See **PACKED COLUMNS, Packing**

**PACKING, Pistons, Hydraulic machinery.** See **HYDRAULIC MACHINERY, Pistons, Seals**

**PACKING, Printing.** See **PRINTING, Packing**

**PADDING, Dyeing, Wollen yarns.** See **YARNS, Wollen, Dyeing, Padding**

**PADDINGTON**

See

FLATS, Paddington

FLYOVERS, Paddington

HOVERCRAFT, Transport, London Airport—Paddington

MAISONNETTES, Paddington

**PADDLE WHEELS, Steam boats.** See **BOATS, Steam, Paddle wheels**

**PADS, Slipper.** See **SLIPPER BEARINGS**

**PAGE, Sir Frederick Handley.** See **HANDLEY PAGE, Sir Frederick**

**PAINT**

Chemically resistant treatments. G. Old. *Painting & Decorating*, 84 (Aug 64) p.30+

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What's new in the paint trade. C. Gifford. *National Builder*, 45 (Jun 64) p.577-8. il.

**PAINT**

Related Headings:

ANTI-FOULING COMPOSITIONS

**PAINT—SUBHEADING—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

Particular countries

U.S.A.

Research

## PAINT—SUBHEADING—Synopsis—cont.

## Defects

Blistering

## Properties

Adhesion

Film levelling

Gloss

Light reflection

Opacity

Weathering

Heat resistance

## Technical activities

## Testing

Microscopy

Sensory testing

Exposure tests

## Analysis

Determination of...

Chromatography

## Manufacture

Mixing

Colour dispensers

## Heating

Colour matching

## Application

Workshops

Spraying

## Drying

Stoving

## Materials

Vehicles

Pigments

Fillers

Driers

Thinners

Solvents

Additives

## Types

## By property

Water thinned

Emulsion

## By vehicle or pigment

Organic

Plastics

Alkyd resin

Polyesters

Acrylic

Polyurethane

Epoxy resin

Inorganic

Zinc

## By purpose

Priming

Fire retardant

Insecticidal

Fungicidal

Artists' materials

## PAINT, Acrylic, Thermosetting

Thermosetting acrylic-resin paints: review of some developments in the U.S.A. P. W. Sherwood. *Metal Finishing J.*, 9 (Dec 63) p.499-500. il.

## PAINT, Acrylic, Water thinned

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Allyn. *Paint J.*, 17 (Apr 64) p.251+

PAINT, Acrylic plastics, Bodies, Commercial vehicles. See Vehicles, Commercial, Bodies, Paint, Acrylic

## PAINT, Additives, Plastorit

Plastorit—a new material for the paint industry. H. Kittel.

*Paint Technology*, 28 (Feb 64) p.42-4. il.

PAINT, Adhesion, Electroplated die castings, Zinc alloys.

See ZINC, Alloys, Die castings, Electroplated, Paint adhesion

## PAINT, Adhesion, Shear tests, Torque spanners

Method for the measurement of the adhesion of surface coatings under service conditions. M. W. Holloway & P. A. Walker. *J. of Oil & Colour Chemists' Ass.*, 47 (Oct 64) p.812-23. il. refs.

## PAINT, Alkyd resins

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## PAINT, Alkyd resins, Modified, Acrylic

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Vinyl and acrylic modified alkyds, pt.4. R. Gunning & D. H. Solomon. *J. of Oil & Colour Chemists' Ass.*, 47 (May 64) p.319-22. refs.

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Lactic acid modified pentaerythritol alkyds. H. R. Touchin. *Paint Technology*, 28 (Jan 64) p.30-3

Medium oil length acid modified linseed glycerol alkyds.

H. R. Touchin. *Paint Technology*, 28 (Jul 64) p.14+

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## PAINT, Artists' materials

Artists' oil paints. *Paint Technology*, 28 (May 64) p.14+. refs.

Impermanence of paintings in relation to artists' materials.

'Gluck'. *Paint J.*, 17 (Mar 64) p.125-9. refs.

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VEHICLES, Commercial, Bodies, Paint, Acrylic

PAINT, Acrylic, Painting, Evaporators, Refrigerators. See

REFRIGERATORS, Evaporators, Painting, Acrylic paint

PAINT, Acrylic, Reinforced plastics, Bodies, Commercial

vehicles. See VEHICLES, Commercial, Bodies, Plastics,

Reinforced, Paint, Acrylic

- PAINT, Bodies, Commercial vehicles.** See **VEHICLES, Commercial, Bodies, Paint**
- PAINT, Bodies, Motor cars.** See **MOTOR CARS, Bodies, Paint**
- PAINT, Bodies, Motor vehicles.** See **MOTOR VEHICLES, Bodies, Paint**
- PAINT, Buildings.** See **BUILDINGS, Paint**
- PAINT, Chromatography**  
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- PAINT, Determination of solvents, Gas chromatography**  
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- PAINT, Electrical engineering components.** See **ELECTRICAL ENGINEERING, Components, Paint**
- PAINT, Emulsion, Aerated, Weight per gallon, Determination, Pressure cups**  
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- PAINT, Emulsion, Coating, Sheets.** See **SHEETS, Coating, Emulsion paint**
- PAINT, Emulsion, P.V.A., Pigments, Dry, Dispersion**  
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- PAINT, Fungicidal, Phenylmercury, Reaction with hydrogen sulphide, Staining**  
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- PAINT, Manufacture, Heating, Gas-fired**  
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- PAINT, Masking, Rhodium electroplating.** See **ELECTROPLATING, Rhodium, Masking paint**
- PAINT, Metals.** See **METALS, Paint**
- PAINT, Microscopy**  
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- PAINT, Opacity, Measurement, Contrast ratio**  
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- PAINT, Pigments, Artists'**  
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**PAINT, Spraying, Pneumatic equipment**

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**PAINT, Workshops, Maintenance**

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**PAINTING**

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DIPPING

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PAINTING, Bodies, Commercial vehicles. See VEHICLES, Commercial, Bodies, Painting

PAINTING, Bodies, Motor cars. See MOTOR CARS, Bodies, Painting

PAINTING, Breweries. See BREWERIES, Painting

PAINTING, Buildings. See BUILDINGS, Painting

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**PAINTING**, Slaughterhouses. See **SLAUGHTERHOUSES**, Painting

**PAINTING**, Steel equipment, Refineries, Petroleum. See

**PETROLEUM**, Refineries, Equipment, Steel, Painting

**PAINTING**, Steel mills. See **STEEL**, Mills, Painting

**PAINTING**, Suspension bridges. See **BRIDGES**, Suspension, Painting

**PAINTING**, Tanks, Fuels, Engines, Motor cars. See **MOTOR CARS**, Engines, Fuels, Tanks, Painting

**PAINTING**, Vending machines. See **VENDING MACHINES**, Painting

**PAINTING**, Washing machine components. See **WASHING MACHINES**, Components, Painting

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**PAISLEY**

See

**CIVIC CENTRES**, Paisley

**PAKISTAN**

See

**AGRICULTURAL CHEMICALS**, Spreading, Aircraft, Pakistan

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See **FUEL CELLS**, Propane-Oxygen, Anodes, Catalysts, Palladium

### **PALLADIUM, Determination, Gravimetry, Reagents,**

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### **PALLETS, Trucks**

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**PANELS**, Aluminium alloys, Raised floors. See **FLOORS**, Raised, Panels, Aluminium alloys

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### **PANELS (Buildings) Sheets, Steel, Coatings, P.V.C.**

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**PANELS, Concrete, Precast, Rolling, Mills**

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**PANELS (Controls) Accessories, Design**

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**PANELS (Controls) Design**

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**PANELS, Curved, Buckling**

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**PANELS (Flats) Concrete, Precasting, Vertical**

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**PANELS, Honeycomb, Forming, Explosives**

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PANELS, Walls, Buildings. See BUILDINGS, Walls, Panels

PANHARD 24CT SPORTS COUPE CARS. See MOTOR

CARS, Types, Panhard 24CT Sports Coupé

**PANNA**

See

DIAMONDS, Mining, Panna

PANS, Frying. See FRYING PANS

PANS, Heating, Crystallisation, Massecuite, Sugar. See SUGAR, Massecuite, Crystallisation, Heating, Pans

PANTOGRAPHS, Testing, Overhead power transmission lines, Railways. See RAILWAYS, Electric, Power transmission lines, Overhead, Testing, Pantographs

**PAPER**

Related Headings:

NEWSPRINT

STATIONERY

WALL PAPERS

**PAPER-SUBHEADINGS-Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

**Properties**

*Strength*

*Rupture*

*Compression*

*Web tension*

*Permeability*

*Sulphur dioxide adsorption*

**Technical activities**

*Testing*

*Inspection*

*Conditioning*

*Coating*

*Colouring*

*Finishing*

*Cutting*

*Guillotines*

*Drilling*

*Perforating*

*Punching*

*Folding*

*Winding*

*Reels*

*Fluting*

*Ruling*

*Sorting*

*Weighing*

*Transporting*

**Materials**

*Fibres*

*Waste*

**Types of paper**

*Coloured*

*Coated*

*No carbon required*

*Tissue*

*Kraft*

PAPER, Bags. See BAGS, Paper

PAPER, Board. See BOARD, Paper

PAPER, Cigarette. See CIGARETTES, Papers

PAPER, Coated, Manufactures

Expansion at Donside. R. B. Kilvert. Paper & Print, 37 (Spring 64) p.55+. il.

PAPER, Coated, Packaging

Re-equipment at Reed's coated paper finishing department. World's Paper Trade Rev., 162 (6 Aug 64) p.409-10. il.

PAPER, Coating

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PAPER, Coating, Blade

Developments in paper coating. J. E. Clayson. Paper Technology, 5 (Apr 64) p.151-4. il. refs.

PAPER, Coating, Germany

Off-machine coating in Germany (extracts) M. Judt. Paper Market (Mar 64) p.30-1

PAPER, Coating, Latex, Synthetic

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PAPER, Coating, Machines

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**PAPER, Coating, Materials, Chromatography, Thin-layer**

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**PAPER, Coating, Polymers, Manufactures**

Scott Bader story... *World's Paper Trade Rev.*, 161 (2 Apr 64) p.1054+. il.

**PAPER, Coating, Silicones**

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**PAPER, Coating, Sodium alginate**

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**PAPER, Coating, Thermoplastics**

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**PAPER, Coloured, Matching**

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**PAPER, Conditioning**

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**PAPER, Conditioning, Machines**

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**PAPER, Conducting, Simulation, Laplacian fields. See****LAPLACIAN FIELDS, Simulation, Paper conducting****PAPER, Continuous stationery. See STATIONERY, Continuous, Paper****PAPER, Cutting, Machines**

New cutter-sorter in operation at Guard Bridge Mill. W. MacLeod & M. Martinson. *World's Paper Trade Rev.*, 162 (27 Aug 64) p.612+. il.

**PAPER, Drilling, Machines**

Warehouse work: miscellaneous equipment. C. L. Reading. *Brit. Printer*, 77 (Dec 64) p.110+. il.

**PAPER, Electrostatic printing. See PRINTING, Electrostatic, Paper****PAPER, Fibres**

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**PAPER, Finishing, Costs**

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**PAPER, Finishing, Inspection, Statistical methods**

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**PAPER, Finishing, Matt, Super calenders**

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**PAPER, Fluting, Machines**

'William' on stream at the new Taplow paper mills. *World's Paper Trade Rev.*, 161 (6 Feb 64) p.415+. il.

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Warehouse work: folding machines. C. L. Reading. *Brit. Printer*, 77 (Aug 64) p.102+. il.

Warehouse work: types of folding machine. C. L. Reading. *Brit. Printer*, 77 (May 64) p.124+. il.

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Winders and cutters for paper and board mills. H. R. W. Marsh. *Paper Technology*, 4 (Dec 63) p.593-600. il.

**PAPER, Handkerchiefs. See HANDKERCHIEFS, Paper****PAPER, Industry**

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Phillipine pulp & paper industry. *World's Paper Trade Rev.*, 162 (6 Aug 64) p.422-3

**PAPER, Industry, South Africa**

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**PAPER, Insulation, Transformers. See TRANSFORMERS, Insulation, Paper****PAPER, Kraft, Gloss, Measurement, Microscopy**

Microscopical method for the investigation of paper gloss. B. Clarke, D. E. V. Whiffen & C. M. Wilson. *Paper Technology*, 5 (Jun 64) p.281-5. il.

**PAPER, Kraft, Production, Machines**

Europe's largest kraft paper machine. *Packaging*, 35 (Mar 64) p.34-5. il.

**PAPER, Kraft, Yarns, Knitting. See KNITTING, Yarns, Paper**

- PAPER, No carbon required**  
NCR production expanded in South Wales and in Belgium.  
H. F. Rance. *World's Paper Trade Rev.*, 162 (22 Oct 64) p.1285+. il.
- PAPER, No carbon required, Coating, Machines**  
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- PAPER, Offset lithography.** See LITHOGRAPHY, Offset, Paper
- PAPER, Oil impregnated, Insulation, Electric cables.** See CABLES, Electric, Insulation, Paper, Oil impregnated
- PAPER, Packaging materials.** See PACKAGING, Papers
- PAPER, Packaging materials, Perfumes.** See PERFUMES, Packaging, Papers
- PAPER, Perforating, Machines**  
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- PAPER, Permeability (Air) Measurement, Instruments**  
Comparison of different instruments for measuring the air permeability of paper. W. Brecht & I. Hampel. *What We Are Doing* (Mar 64) p.37-8
- PAPER, Permeability, Liquids**  
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- PAPER, Photography.** See PHOTOGRAPHY, Papers
- PAPER, Photogravure, Printing, Periodicals.** See PERIODICALS, Printing, Photogravure, Paper
- PAPER, Postage stamps.** See POSTAGE STAMPS, Paper
- PAPER, Printing.** See PRINTING, Paper
- PAPER, Printing, Books.** See BOOKS, Printing, Paper
- PAPER, Punching, Machines**  
Warehouse work: miscellaneous equipment. C. L. Reading. *Brit. Printer*, 77 (Dec 64) p.110+. il.
- PAPER, Reels, Winders**  
Winders and cutters for paper and board mills. H. R. W. Marsh. *Paper Technology*, 4 (Dec 63) p.593-600. il.
- PAPER, Ruling, Disc, Machines**  
Machine ruling: operating a disc machine. W. G. Evans. *Brit. Printer*, 77 (Jan 64) p.100+. il.
- PAPER, Rupture, Tensile**  
Tensile rupture of paper. P. A. Tydeman & A. M. Hiron. *What We Are Doing* (Jun 64) p.9-21. il. refs.
- PAPER, Rupture, Tensile, Measurement, Beta radiography**  
Simple method for contact beta-radiography of paper. P. A. Tydeman. *What we are doing* (Oct 64) p.10-21. il.
- PAPER, Sacks.** See SACKS, Paper
- PAPER, Sacks, Food storage.** See FOOD, Storage, Sacks, Paper
- PAPER, Sacks, Refuse disposal.** See REFUSE, Disposal, Sacks, Paper
- PAPER, Serviettes.** See SERVIETTES, Paper
- PAPER, Sorting, Machines**  
New cutter-sorter in operation at Guard Bridge Mill. W. MacLeod & M. Martinson. *World's Paper Trade Rev.*, 162 (27 Aug 64) p.612+. il.
- PAPER, Strength, Effect of fibre conformability**  
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- PAPER, Sulphur dioxide adsorption**  
Pick-up of sulphur dioxide by paper. F. L. Hudson, R. L. Grant & J. A. Hockey. *J. of Applied Chemistry*, 14 (Oct 64) p.444-7. il. refs.
- PAPER, Tape, Control systems, Machine tools.** See MACHINE TOOLS, Control systems, Punched paper tape
- PAPER, Tape, Data transmission, Marshalling yards, Railways.** See RAILWAYS, Marshalling yards, Data transmission, Punched paper tape
- PAPER, Tape, Data recording.** See DATA LOGGING, Paper tape
- PAPER, Tape, Input units, Computers.** See COMPUTERS, Input units, Paper tape
- PAPER, Tape, Input units, Computers, Conversion from magnetic tape, Flight recorders.** See FLIGHT RECORDERS, Tape, Magnetic, Conversion, Computer inputs, Paper tape
- PAPER, Testing, Temperature control**  
Controlling the climate in the testing room (extracts) E. Stephansen. *Paper Market*, (Apr 64) p.25-6
- PAPER, Testing, Tensile, Machines**  
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- PAPER, Tissue (Cleansing) Production, Machines**  
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- PAPER, Tissue (Cleansing) Production, Machines, Ward-Leonard sets**  
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- PAPER, Tissue (Cleansing) Production, Mechanical handling**  
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- PAPER, Towels.** See TOWELS, Paper
- PAPER, Transporting**  
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- PAPER, Waste, Recovery**  
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- PAPER CHROMATOGRAPHY.** See CHROMATOGRAPHY, Paper
- PAPER CHROMATOGRAPHY, Detergents.** See DETERGENTS, Analysis, Chromatography, Paper
- PAPER CHROMATOGRAPHY, Meat extractives.** See MEAT, Extractives, Chromatography, Paper
- PAPER CHROMATOGRAPHY, Organotins.** See ORGANOTINS, Paper chromatography
- PAPER CHROMATOGRAPHY, Separation, Sugar phosphates.** See SUGAR PHOSPHATES, Separation, Chromatography, Paper
- PAPER CHROMATOGRAPHY, Tableted soups.** See SOUPS, Tableted, Chromatography, Paper
- PAPER CHROMATOGRAPHY, Yeast extracts.** See YEAST, Extracts, Chromatography, Paper
- PAPER-PHENOLIC RESINS, Laminates, Furniture.** See FURNITURE, Laminates, Paper-Phenolic resins
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**PAPERMAKING—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

**History**

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**Particular localities**

China

**Information services**

*Libraries*

*Education*

*Research*

*Laboratories*

*Experiments*

**Problems**

*Effluents*

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**Chemistry**

*Moisture content*

**Equipment**

*Machines*

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**Technical activities**

*Critical path analysis*

*Stock preparation*

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*Mixing*

*Mixers*

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*Heating*

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**Materials**

*Water*

*White water*

*Fillers*

*Casein*

*Polymers*

*Man-made fibres*

*Rosin*

*Detergents*

*Felt*

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**SUPERCALENDERS**

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ELECTRON SPIN RESONANCE

**PARAMAGNETIC RESONANCE, Gadolinium, Impurities, Single crystals, Zircon. See ZIRCON, Crystals, Single, Impurities, Gadolinium, Paramagnetic resonance****PARAMAGNETIC SUSCEPTIBILITY, Thermometers, Cryogenics. See THERMOMETERS, Cryogenics, Paramagnetic susceptibility****PARAMETRIC AMPLIFIERS. See AMPLIFIERS, Parametric****PARAMETRIC DIODES. See DIODES, Parametric****PARAMETRIC DIODES, Frequency multipliers. See FREQUENCY, Multipliers, Diodes, Parametric****PARAMETRIC FREQUENCY DIVIDERS. See FREQUENCY, Dividers, Parametric****PARATHION, Residues, Determination in cocoa beans. See COCOA, Beans, Determination of parathion residues****PARCELS, Sorting, Machines, Storage units**

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HOUSING, Prefabrication, Paris

RAILWAYS, Underground, Paris

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**PERMEABILITY**, Hot pressed alumina ceramics. See

**ALUMINA**, Ceramics, Hot pressed, Permeability

**PERMEABILITY**, Layered soil. See **SOIL**, Layered, Permeability

**PERMEABILITY**, Magnetic, Nickel-Zinc ferrites. See

**NICKEL-ZINC FERRITES**, Magnetic permeability

**PERMEABILITY**, Magnetic materials. See **MAGNETIC**

**MATERIALS**, Permeability

PERMEABILITY, Packages, Cotton, Yarns. See YARNS, Cotton, Packages, Permeability  
 PERMEABILITY, Packaging materials. See PACKAGING, Materials, Permeability  
 PERMEABILITY, Packaging materials, Food. See FOOD, Packaging, Materials, Permeability  
 PERMEABILITY, Paper. See PAPER, Permeability  
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ELECTRONICS, Components, Corrosion, Perspiration

PERSPIRATION, Effect on elastic fabrics, Clothing. See

CLOTHING, Fabrics, Elastic, Effect of perspiration

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See NUCLEAR REACTORS, Neutrons, Flux, Perturbation theory

PERU

See

HYDROELECTRIC POWER, Lima

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FUNGICIDES

INSECTICIDES

NEMATOCIDES

THIURAM

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## PETROLEUM

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DIESEL ENGINES, Fuels  
FUEL OIL  
GAS OIL  
KEROSENE  
MAZOUT  
NAPHTHA  
PETROCHEMICALS  
PETROL

## PETROLEUM—SUBHEADINGS—Synopsis

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

Education

Research

*Laboratories*

Problems

*Fires*

Chemistry

*Analysis*

*Gas chromatography*

Deposits

*Genesis*

*Reservoirs*

Production

*Prospecting*

*Drilling*

*Natural gas, Separation*

*Refining*

*Refineries*

*Handling*

Storage

Transport

Distribution

*Pipelines*

Products

*Light distillates*

*Resins*

PETROLEUM, Coke, Graphitisation production. See

GRAPHITE, Production (Petroleum coke)

PETROLEUM, Crude, Diesel engines, Ships. See SHIPS,

Diesel engines, Crude oil

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**PHOSPHATES, Rock.** See **ROCK, Phosphates**

**PHOSPHATES-TANNINS, Inhibitors, Sulphate reducing bacteria, Corrosion, Iron.** See **IRON, Corrosion, Sulphate reducing bacteria, Inhibitors, Phosphates-Tannins**

**PHOSPHIDE EUTECTIC, Grey iron.** See **IRON, Grey, Phosphide eutectic**

**PHOSPHINE OXIDES, Tertiary, Production, Diphenyl phenylphosphonate**

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**PHOSPHOLIPIDS, Liquid crystals**

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**PHOSPHOR-BRONZE**, Blanks, Worm gears. See **GEARS**, Worm, Blanks, Phosphor-bronze

**PHOSPHORIC ACID, Determination of calcium, Flame photometry**

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**PHOSPHORIC ACID**, Electrolytes, Polishing, Copper, Anodes. See **ANODES**, Copper, Polishing, Phosphoric acid electrolytes

**PHOSPHORIC ACID, Production, By-products, Fluorine compounds**

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**PHOSPHORS**

Related Headings:

CADMIUM SULPHIDE

ZINC SULPHIDE

ZINC SULPHIDE-COPPER

**PHOSPHORS, Image retaining**

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**PHOSPHORS**, Screens, Cathode ray tubes. See **ELECTRON TUBES**, Cathode ray, Screens, Phosphors

**PHOSPHORUS**, Determination, Coal. See **COAL**, Determination of phosphorus

**PHOSPHORUS**, Determination, Coke. See **COKE**, Determination of phosphorus

**PHOSPHORUS**, Determination, Steel. See **STEEL**, Determination of phosphorus

**PHOSPHORUS**, Effect on steel, Railway wagon parts. See **RAILWAYS**, Wagons, Parts, Steel, Effect of phosphorus

**PHOSPHORUS**, Fruit. See **FRUIT**, Phosphorus content

**PHOSPHORUS**, Organic compounds. See **ORGANOPHOSPHORUS COMPOUNDS**

**PHOSPHORUS, Production, Aminocyclophosphazenes, Crucibles, Platinum metals**

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**PHOSPHORUS**, Removal. See **DEPHOSPHORISATION**

**PHOSPHOTUNGSTATES**, Quaternary ammonium salt determination. See **AMMONIUM SALTS**, Quaternary, Determination, Phosphotungstates

**PHOTOCHEMICAL OXIDATION**, Bitumen. See **BITUMEN**, Oxidation, Photochemical

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PHOTOLYSIS

**PHOTOCHEMISTRY**, Anthraquinone dyes, Dyeing, Man-made fibres. See **MAN-MADE FIBRES**, Dyeing, Anthraquinone dyes, Photochemistry

**PHOTOCHEMISTRY**, Solutions (Organic solvents) Anthraquinone dyes. See **ANTHRAQUINONE DYES**, Solutions (Organic solvents) Photochemistry

**PHOTOCHEMISTRY**, Sulphenyl chlorides. See **SULPHENYL CHLORIDES**, Photochemistry

**PHOTOCONDUCTIVE CELLS**, Controls, Lamps, Lighting, Streets. See **STREETS**, Lighting, Lamps, Controls, Photoconductive cells

**PHOTOCONDUCTIVE CELLS (Storage) Arsenic triselenide**  
Storage of photoconductivity in arsenic triselenide. A. A. Turnbull. *Brit. J. of Applied Physics*, 15 (Sep 64) p.1051-5. il. refs.

**PHOTOCONDUCTIVITY**, Cadmium sulphide. See **CADMIUM SULPHIDE**, Photoconductivity

**PHOTOCONDUCTIVITY**, Curves, Thermal glow method, Electron trap studies, Cadmium sulphide. See **CADMIUM SULPHIDE**, Electron traps, Studies, Thermal glow method, Photoconductivity curves

**PHOTOCONDUCTORS-LAMPS**, Switching circuits. See **SWITCHING CIRCUITS**, Lamps-Photoconductors

**PHOTOCOPYING**

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New reprographic centre [Kodak Ltd.] *Brit. J. of Photography*, 111 (24 Apr 64) p.320

**PHOTOCOPYING**

Related Headings:

DIAZO COMPOUNDS, Photocopying

ELECTROPHOTOGRAPHY

ILLUSTRATIONS, Half-tone, Photocopying

MICROFILM

**PHOTOCOPYING**, Drawings, Engineering. See **ENGINEERING**, Drawings, Photocopying

**PHOTOCOPYING, Equipment**

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Camera adjustments for accurate-sized images. E. T. Wilson. *J. of Photographic Science*, 12 (Nov/Dec 64) p.328-30

**PHOTOCOPYING (Silver halide emulsions)**

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**PHOTOELASTICITY**

Related Headings:

BIREFRINGENCE

STRESS-OPTICAL COEFFICIENT

**PHOTOELASTICITY**, Delta wings, Aircraft. See **AIRCRAFT**, Wings, Delta, Photoelasticity

**PHOTOELASTICITY**, Diamonds, Semiconductors. See **SEMI-CONDUCTORS**, Diamonds, Photoelasticity

**PHOTOELASTICITY**, Dynamic stresses. See **STRESSES**, Dynamic, Photoelasticity

**PHOTOELASTICITY**, Fillets, Nickel-molybdenum-chromium-steel, Channel sections. See **SECTIONS**, Channel, Steel-Chromium-Molybdenum-Nickel, Fillets, Photoelasticity

**PHOTOELASTICITY**, Glass, Screens, Tubes, Receivers, Television. See **TELEVISION**, Receivers, Tubes, Screens, Glass, Photoelasticity

**PHOTOELASTICITY, Measurements, Instruments**

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#### PHOTOELASTICITY, Models, Polymers

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PHOTOELASTICITY, Swept wings, Aircraft. See AIRCRAFT, Wings, Swept, Photoelasticity

PHOTOELASTICITY, Tensile stresses determination, Holes, Metal plates. See PLATES, Metals, Holes, Stresses, Tensile, Determination, Photoelasticity

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PHOTOCONDUCTIVE CELLS

PHOTOVOLTAIC CELLS

#### PHOTOELECTRIC CELLS, Control systems

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PHOTOELECTRIC CELLS, Control systems, Straight line guidance, Excavation equipment, Trenches. See TRENCHES, Excavation, Equipment, Straight line guidance, Control systems, Photoelectric cells

PHOTOELECTRIC CELLS, Germanium, Radiation pyrometers. See PYROMETERS, Radiation, Photoelectric cells, Germanium

PHOTOELECTRIC DETECTORS, Auto-collimating telescopes. See TELESCOPES, Auto-collimating, Detectors, Photoelectric

PHOTOELECTRIC DETECTORS, Contamination, Fuels. See FUELS, Contamination, Detectors, Photoelectric

PHOTOELECTRIC DETECTORS, Optical communications engineering. See COMMUNICATIONS, Engineering, Optical, Detectors, Photoelectric

PHOTOELECTRIC EMISSION, Oxidation, Aluminium. See ALUMINIUM, Oxidation, Photoelectric emission

PHOTOELECTRIC EQUIPMENT, Brewing yeast concentration determination, Fermentation, Malt extracts. See MALT, Extracts, Fermentation, Yeast (Brewing) Concentration, Determination, Photoelectric equipment

PHOTOELECTRIC EQUIPMENT, Particle concentration determination, Colloidal suspensions. See SUSPENSIONS, Colloids, Particles, Concentration, Determination, Photoelectric equipment

PHOTOELECTRIC GUARDS, Machine tools. See MACHINE TOOLS, Guards, Photoelectric

PHOTOELECTRIC LOGICAL ELEMENTS, Computers. See COMPUTERS, Logical elements, Photoelectric

PHOTOELECTRIC MEASUREMENT, Amplitudes, Vibrations. See VIBRATIONS, Amplitudes, Measurement, Photoelectric

PHOTOELECTRIC MEASUREMENT, Diameters, Extrusion, Polythene insulation, Submarine cables, Telephony. See TELEPHONY, Cables, Submarine, Insulation, Polythene, Extrusion, Diameters, Measurement, Photoelectric

PHOTOELECTRIC MEASUREMENT, Diameters, Metal rods.

See RODS, Metal, Diameters, Measurement, Photoelectric

PHOTOELECTRIC MEASUREMENT, Hot metal slabs. See

SLABS, Metal, Hot, Measurement, Photoelectric

PHOTOELECTRIC MEASUREMENT, Hydrogen adsorption effect, Work function, Palladium. See PALLADIUM, Electron work function, Effect of hydrogen adsorption, Photoelectric measurement

PHOTOELECTRIC MEASUREMENT, Hydrogen adsorption effect, Work function, Tantalum. See TANTALUM, Electron work function, Effect of hydrogen adsorption, Photoelectric measurement

PHOTOELECTRIC MEASUREMENT, Opacity, Fabrics, Clothing. See CLOTHING, Fabrics, Opacity, Measurement, Photoelectric

PHOTOELECTRIC SCANNING, Colour separations, Half-tone illustrations. See ILLUSTRATIONS, Half-tone, Colour separations, Scanning, Photoelectric

PHOTOELECTRIC SCANNING, Engraving, Half-tone illustrations. See ILLUSTRATIONS, Half-tone, Engraving, Photoelectric scanning

PHOTOELECTRIC SCANNING, Film levelling, Paint. See PAINT, Film levelling, Scanning, Photo-electric

PHOTOELECTRIC SCANNING, Interferometers, Optical flatness testing. See OPTICAL FLATNESS, Testing, Interferometers, Scanning, Photoelectric

PHOTOELECTRIC SIZE CONTROLLERS, Copying lathes. See LATHES, Copying, Size controllers, Photoelectric

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#### PHOTOENGRAVING

Related Headings:

PROCESS CAMERAS

PHOTOENGRAVING, Microminiature electronic circuits. See CIRCUITS, Electronics, Microminiature, Photoengraving

#### PHOTOENGRAVING, Plates, Resists

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#### PHOTOGRAMMETRY, Japan

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PHOTOGRAMMETRY, Lighting research. See LIGHTING, Research, Photogrammetry

#### PHOTOGRAMMETRY, Position errors

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#### PHOTOGRAMMETRY, Stereoplotters

B8-Stereomat. W. Löscher. *Photogrammetric Record*, 4 (Oct 64) p.476-82. il. ref.

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#### PHOTOGRAMMETRY, Stereoplotters, Orientation, Relative

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**PHOTOGRAMMETRY, Stereoscopy**

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**PHOTOGRAMMETRY**, Surveying, Roads. See **ROADS**, Surveying, Photogrammetry

**PHOTOGRAPHIC SOCIETY OF NEW ZEALAND**

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**PHOTOGRAPHY**

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**PHOTOGRAPHY**

Related Headings :

CALOTYPE

CAMERAS

CINEMATOGRAPHY

ELECTROPHOTOGRAPHY

EXPOSURE METERS

FILM, Photographic

MACROPHOTOGRAPHY

PROCESS PHOTOGRAPHY

PROJECTORS

**PHOTOGRAPHY—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

*History*

*Organisations*

*Education*

*Equipment*

*Processing*

*Darkroom*

*Development*

*Developers*

*Fixing*

*Printing*

*Papers*

*Enlarging*

*Enlargers*

*Photographic materials*

*Information theory*

*Modulation transfer function*

*Emulsions*

*Chemicals*

*Heat sensitised materials*

*Photographic qualities*

*Image quality*

*Image sharpness*

*Photographic specialities*

*Colour*

*Flashlight*

*Stereoscopic*

*Scientific*

*Industrial*

*Air*

*Naval*

*Systems*

*Kalvar*

**PHOTOGRAPHY**, Air, Aircraft, Navigation systems, Radar, Doppler

Doppler navigation for survey flying and control. J. S. English & M. G. Huggett. *Photogrammetric Record*, 4 (Oct 64) p.443-65. il. ref.

**PHOTOGRAPHY**, Air, Aircraft, Turns, Calculations, Slide rules

Slide rule for the computation of precision turns in air survey navigation. E. Walker. *Photogrammetric Record*, 4 (Oct 64) p.489-502. il. refs.

**PHOTOGRAPHY**, Air, Surveying, Erosion protection, Land, Catchment areas. See **CATCHMENT AREAS**, Land, Erosion, Protection, Surveying, Photography, Air

**PHOTOGRAPHY**, Air, Town planning. See **TOWN PLANNING**, Photography, Aerial

**PHOTOGRAPHY**, Aircraft. See **AIRCRAFT**, Photography

**PHOTOGRAPHY**, Chemicals, Manufactures, Mechanical handling

Handling system ensures purity of material at photographic chemicals plant [Tote bins] *Chemical Processing*, 10 (Nov 64) p.102-3. il.

**PHOTOGRAPHY**, Colour

Problems of reversal colour. A. F. Taylor. *Brit. J. of Photography*, 111 (27 Nov 64) p.972-3. il.

**PHOTOGRAPHY**, Colour, Film

Gevacolor NS 'Mask' type 550 colour negative film, daylight type, and its processing. E. C. Gehret. *Brit. J. of Photography*, 111 (9 Oct 64) p.808+. il. refs.

**PHOTOGRAPHY**, Colour, Interiors

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**PHOTOGRAPHY**, Colour, Printing

Colour copying. G. Baxter. *Litho-Printer*, 7 (Jul 64) p.21+

**PHOTOGRAPHY**, Colour, Printing, Silver dye-bleach process

Ciba Cilchrome-print process. *Brit. J. of Photography*, 111 (17 Apr 64) p.308-9

**PHOTOGRAPHY**, Colour, Processing

Cilchrome colour print process. E. Ch. Gehret. *Brit. J. of Photography*, 111 (19 Jun 64) p.480-1. il. refs.

Ektachrome colour reversal paper and its processing. E. C. Gerhet. *Brit. J. of Photography*, 111 (4 Sep 64) p.722-3

Processing Adox colour C18. E. Ch. Gehret. *Brit. J. of Photography*, 111 (21 Feb 64) p.144

**PHOTOGRAPHY**, Colour, Processing, Equipment

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Holmuller Color Automat. G. W. Crawley. *Brit. J. of Photography*, 111 (12 Jun 64) p.460-2. il.

**PHOTOGRAPHY**, Colour, Scholarships

Kodak scholarships in colour photography. *Brit. J. of Photography*, 111 (17 Jan 64) p.48-9

**PHOTOGRAPHY**, Colour, Specifications

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**PHOTOGRAPHY**, Colour, Theory

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**PHOTOGRAPHY**, Combustion research, Fuel oil. See **FUEL OIL**, Combustion, Research, Photography

**PHOTOGRAPHY**, Combustion research, Gas oil. See **GAS OIL**, Combustion, Research, Photography

**PHOTOGRAPHY**, Crimp measurement, Cotton fibres. See **COTTON**, Fibres, Crimp, Measurement, Photography

**PHOTOGRAPHY**, Darkroom equipment

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**PHOTOGRAPHY, Air**

Art of taking air photographs. J. A. Eden. *Photogrammetric Record*, 4 (Apr 64) p.367-8. il. refs.

**PHOTOGRAPHY, Developers, Hydroquinone, Inhibitors, Polyethylene glycols**

On the effect of polyethylene oxides on hydroquinone development. H. W. Wood. *J. of Photographic Science*, 12 (Jan/Feb 64) p.5-14. il. refs.

**PHOTOGRAPHY, Development, Internal latent image**

Differential development of the internal latent image. J. Malinowski & G. Karadjow. *J. of Photographic Science*, 12 (Jan/Feb 64) p.47-54. il. refs.

**PHOTOGRAPHY, Development, Replenishment processing**

Replenishment of solutions in batch processing. P. Carlu. *J. of Photographic Science*, 12 (Mar/Apr 64) p.61-70. il. refs.

**PHOTOGRAPHY, Development, Solarisation**

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G. C. Farnell, J. B. Chanter & F. S. Judd. *J. of Photographic Science*, 12 (Jan/Feb 64) p.1-4. il. refs.

**PHOTOGRAPHY, Development, Tanks, Steel, Stainless**

On the market: Nikor developing tanks. *Brit. J. of Photography*, 111 (28 Feb 64) p.164-5. il.

**PHOTOGRAPHY, Education**

Teaching photographers. G. L. Wakefield. *Brit. J. of Photography*, 111 (28 Aug 64) p.706-7

Teaching photographic theory: an approach for the student teacher. G. L. Wakefield. *Brit. J. of Photography*, 111 (21 Aug 64) p.670-1

**PHOTOGRAPHY, Education, Directories**

Geographical list of training centres for photographers. *Brit. J. of Photography*, 111 (4 Sep 64) p.724-5

**PHOTOGRAPHY, Electron microscopy. See MICROSCOPY,**

Electron, Photographs

**PHOTOGRAPHY, Emulsions**

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**PHOTOGRAPHY, Emulsions, Crystals, Growth**

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**PHOTOGRAPHY, Emulsions, Granularity, Measurement**

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**PHOTOGRAPHY, Emulsions, Granularity, Measurement, Microdensitometry**

Film granularity measurement by Kodak. *Industrial Electronics*, 2 (May 64) p.213-14. il.

**PHOTOGRAPHY, Emulsions, Instruments, Rockets, X-ray**

studies, Ionosphere. See IONOSPHERE, X-rays, Studies (Rockets) Instruments, Photographic, Emulsions

**PHOTOGRAPHY, Emulsions, Latent image specks**

Number and distribution of latent image specks inside the emulsion grains. J. Malinowski. *J. of Photographic Science*, 12 (May/Jun 64) p.143-7. il. refs.

**PHOTOGRAPHY, Emulsions, Monodisperse, Silver chloride**

Precipitation of silver chloride from homogeneous solution. J. J. Black, M. J. Insley & G. D. Parfitt. *J. of Photographic Science*, 12 (Mar/Apr 64) p.86-90. il. refs.

**PHOTOGRAPHY, Emulsions, Response curves**

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**PHOTOGRAPHY, Emulsions, Silver bromide, Crystallisation**

Crystal growth during the formation of silver-bromide dispersion in gelatin. R. W. Berriman. *J. of Photographic Science*, 12 (May/Jun 64) p.121-33. il. refs.

**PHOTOGRAPHY, Emulsions, Silver bromide, Effect of colloids, Studies, Electron microscopy**

On the crystal habit and particle size distribution of AgBr emulsions prepared in the presence of synthetic colloids. G. Saini, G. Polla-Mattiot, A. Leoni & M. Marini. *J. of Photographic Science*, 12 (Nov/Dec 64) p.307-11. il. refs.

**PHOTOGRAPHY, Emulsions, Spectrophotometry**

Some observations relating to the measurement of fine structure in the absorption spectrum of silver halide. R. V. G. Searle. *J. of Photographic Science*, 12 (May/Jun 64) p.168-73. il. refs.

**PHOTOGRAPHY, Emulsions, Uppermost elementary layer, Exposure, Effect of light scattering**

Influence of light scattering in a photographic layer on the exposure of the uppermost elementary layer. A. Spuhler & F. Trautweiler. *J. of Photographic Science*, 12 (Mar/Apr 64) p.57-60. refs.

**PHOTOGRAPHY, Endoscopy. See ENDOSCOPY, Photography****PHOTOGRAPHY, Engineering design. See ENGINEERING, Design, Photography****PHOTOGRAPHY, Enlargers**

Blumfield Masterprinter enlarger. *Laboratory Practice*, 13 (Jan 64) p.30-1. il.

**PHOTOGRAPHY, Enlarging, Lighting, Equipment**

Enlarger lighting units and lenses. F. G. Wallis. *Litho-Printer*, 7 (May 64) p.53. il.

**PHOTOGRAPHY, Enlarging, Optical plane tilting**

Enlarger lighting units and lenses. F. G. Wallis. *Litho-Printer*, 7 (May 64) p.53. il.

**PHOTOGRAPHY, Equipment**

Coming year. G. W. Crawley. *Brit. J. of Photography*, 111 (3 Jan 64) p.2+

Prediction of lens-camera efficiency by analytical methods. J. H. Ellinger. *Brit. J. of Photography*, 111 (17 Jan 64) p.42-6. il.

**PHOTOGRAPHY, Equipment, Lecture halls**

Lecture theatre and photographic darkroom. R. S. J. Palmer. *Technical Education & Industrial Training*, 6 (Sep 64) p.446-8. il.

**PHOTOGRAPHY, Equipment, Manufactures**

Zeiss Ikon-Stuttgart. G. W. Crawley. *Brit. J. of Photography*, 111 (14 Feb 64) p.114-17. il.

Zeiss Ikon-Stuttgart (contd.) G. W. Crawley. *Brit. J. of Photography*, 111 (21 Feb 64) p.136-9. il.

**PHOTOGRAPHY, Equipment, Manufactures, West Germany**

West German scene. *Brit. J. of Photography*, 111 (17 Jan 64) p.39-41. il.

**PHOTOGRAPHY, Equipment, Storage, Warehouses**

Nothing negative about Kodak warehousing. *Storage Handling Distribution*, 7 (Mar 64) p.42+. il.

**PHOTOGRAPHY, Equipment, Storage, Warehouses, Mechanical handling equipment**

Kodak's new distribution centre. K. Mumby. *Mechanical Handling*, 51 (Aug 64) p.492-6. il.

**PHOTOGRAPHY, Etching studies, Photogravure. See PHOTO-**

GRAVURE, Etching, Studies, Photography

**PHOTOGRAPHY, Explosions. See EXPLOSIONS, Photography****PHOTOGRAPHY, Fixing**

Photographic fixing. H. Thon. *Litho-Printer*, 7 (Jan 64) p.28+

**PHOTOGRAPHY, Flashlight, Equipment**

Braun F40. *Brit. J. of Photography*, 111 (16 Oct 64) p.847. il.

**PHOTOGRAPHY, Flashlight, Stroboscopes**

Simple electronic stroboscope: use of two flash-tubes for multiple exposure photography. J. D. Pye. *Wireless World*, 70 (Jul 64) p.339-42. il. refs.

**PHOTOGRAPHY, Gas-Liquid flow studies. See GAS-**

LIQUID SYSTEMS, Flow, Studies, Photography

**PHOTOGRAPHY, Heat sensitised materials, Films, Lead iodide**

Image recording in lead iodide. A. J. Forty, R. I. Dawood & M. R. Tubbs. *J. of Scientific Instruments*, 41 (May 64) p.274-6. il.

New photographic process. A. J. Forty. *New Scientist*, 21 (20 Feb 64) p.470-1. il.

**PHOTOGRAPHY, History**

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**PHOTOGRAPHY, Image quality, Subjective, Studies, Prints**

Photographic image simulation [production of photographs with prescribed speed function, granularity, tonal scale, image size or scale] F. Scott. *J. of Photographic Science*, 12 (May/Jun 64) p.139-42. il. refs.

**PHOTOGRAPHY, Image sharpness, Halation, Reflection**

Halation by reflexion in photographic layers. K. Vendrovsky & I. Pokoushke. *J. of Photographic Science*, 12 (Mar/Apr 64) p.71-5. il. refs.

**PHOTOGRAPHY, Image sharpness, Measurement, Instruments**

Measuring image sharpness [Focatron] F. G. Wallis. *Litho-Printer*, 7 (Jul 64) p.39-40. il.

**PHOTOGRAPHY, Image sharpness, Measurement, Microdensitometry**

Picture blur and the negative; practical method of measurement. T. V. Hauser. *Brit. J. of Photography*, 111 (20 Mar 64) p.226+. il. refs.

Sharpness of reflected images. R. E. Stapleton. *J. of Photographic Science*, 12 (Nov/Dec 64) p.289-95. il. refs.

**PHOTOGRAPHY, Industrial**

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- PITTING, Surfaces, Single crystals, Aluminium. See ALUMINIUM, Crystals, Single, Surfaces, Pitting
- PIVOTED DISC VALVES. See VALVES, Disc, Pivoted
- PIVOTED DISC VALVES, Cooling systems, Power stations. See POWER STATIONS, Cooling systems, Valves, Disc, Pivoted
- PIVOTED DISC VALVES, Effect on Venturi tubes, Water flow measurement. See WATER, Flow, Measurement, Venturi tubes, Effect of valves, Pivoted disc
- PIVOTED DISC VALVES—FLOWMETERS, Blast distribution control, Tuyeres, Blast furnaces. See FURNACES, Blast, Tuyeres, Blast distribution, Control, Flowmeters—Pivoted disc valves
- PLANAR DIODES. See DIODES, Planar
- PLANAR DIODES, Balanced video attenuators. See ATTENUATORS, Video, Balanced, Diodes, Planar
- PLANAR TRANSISTORS. See TRANSISTORS, Planar
- PLANE BOUNDARIES, Reflection, Point source light. See LIGHT, Point source, Reflection, Boundary planes
- PLANE ELECTRODES. See ELECTRODES, Plane
- PLANE STRAIN, Elliptical Griffith cracks. See CRACKS, Griffith, Elliptical, Plane strain
- PLANE STRAIN COMPRESSION TESTS, Aluminium. See ALUMINIUM, Compression tests, Plane strain
- PLANE STRAIN COMPRESSION TESTS, High temperature, Coefficient of friction, Aluminium. See ALUMINIUM, Friction, Coefficient, High temperature, Plane-strain compression tests
- PLANE STRAIN COMPRESSION TESTS, Lead. See LEAD, Compression tests, Plane strain
- PLANE STRAIN TESTING, Shear strength, Sand, Soil. See SOIL, Sand, Shear strength, Plane strain testing
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PLASTIC DEFORMATION, Effect on dissolution, Copper sulphate solutions, Copper anodes. See ANODES, Copper, Copper sulphate solutions, Dissolution, Effect of plastic deformation

PLASTIC DEFORMATION, Effect on dissolution, Hydrochloric acid solutions, Iron anodes. See ANODES, Iron, Hydrochloric acid solutions, Dissolution, Effect of plastic deformation

PLASTIC DEFORMATION, Effect on dissolution, Hydrochloric acid solutions, Nickel anodes. See ANODES, Nickel, Hydrochloric acid solutions, Dissolution, Effect of plastic deformation

PLASTIC DEFORMATION, Effect on resistivity, Metals. See METALS, Electrical resistivity, Effect of plastic deformation

PLASTIC DEFORMATION, Girders, Cranes. See CRANES, Girders, Plastic deformation

PLASTIC DEFORMATION, Nickel. See NICKEL, Plastic deformation

PLASTIC DEFORMATION, Niobium. See NIOBIUM, Strain, Plastic

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PLASTIC DEFORMATION, Single crystals, Germanium. See GERMANIUM, Crystals, Single, Plastic deformation

PLASTIC DEFORMATION, Steel, Strips. See STRIPS, Steel, Plastic strain

PLASTIC INSTABILITY, Fracture, Metals. See METALS, Fracture, Plastic instability theory

PLASTIC TORSION, I-section beams. See BEAMS, I-section, Torsion, Plastic

PLASTIC TORSION, Resistivity, Silver, Wires. See WIRES, Silver, Resistivity, Effect of plastic torsion

PLASTICISERS, Determination, Lacquers. See LACQUERS, Determination of plasticisers

PLASTICISERS, P.V.C. See P.V.C., Plasticisers

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ACRYLONITRILE-BUTADIENE-STYRENE

ACRYLONITRILE-STYRENE

ALKYD RESINS

AMINO RESINS

CELLULOSE, Plastics

CELLULOSE ACETATE

DIALLYL PHTHALATE

DIFURFURALIDENE ACETONE, Polymers

EPOXY RESINS

FLUOROCARBONS, Resins

FURANE, Resins

MELAMINE

MELAMINE-FORMALDEHYDE

NYLON

P.T.F.E.

P.V.A.

P.V.C.

PHENOL FORMALDEHYDE

PHENOLIC RESINS

PHENOXY RESINS

PLASTICISERS

POLYACETALDEHYDE

POLYAMIDES

POLYCARBONATE RESINS

POLYDIMETHYLACRYLAMIDE

POLYESTERS

POLYETHERS, Chlorinated

POLYETHYLENE TEREPHTHALATE

POLY-4-METHYL-PENTENE-1

POLYIMIDE RESINS

POLYISOBUTENE

POLYMETHYL METHACRYLATE

POLYMETHYLENE

POLYOLEFINES

POLYOXYPROPYLENE

POLYPROPYLENE

POLYPYROMELLITIMIDE

POLYSTYRENE

POLYTHENE

POLYURETHANE

POLYVINYL ALCOHOL

POLYVINYL CARBAZOLE

POLYVINYLDINE CHLORIDE

RESINS

THERMOPLASTICS

UREA-FORMALDEHYDE

VINYL POLYMERS

**PLASTICS—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

Research

Technical literature

Properties

Strength

Colour

Chemistry

Decomposition

Thermal analysis

Spectrophotometry



## PLASTICS—SUBHEADINGS—Synopsis—cont.

## Technical activities

## Testing

## Manufactures

## Mixing

## Forming

## Moulding

## Extrusion

## Extruders

## Stamping

## Turning

## Welding

## Fastening

## Coating

## Gas plating

## Printing

## Transport

## Constituents

## Chemicals

## Additives

## Pigments

## Types of plastics

## By chemical properties

## Aromatic

## By derivation

## Petrochemicals

## Expanded

## Reinforced

## Thermosetting

## Fireproof

## Products

## Mouldings

## Applications

## Engineering

## Electrical insulating materials

## Electronic engineering

## Nuclear engineering

## Building materials

## Prefabricated building materials

## Antistatic agents

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PLASTICS, Cages, Ball bearings. See BEARINGS, Ball, Cages, Plastics

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- PLASTICS, Coatings, Chemical engineering plant. See CHEMICAL ENGINEERING, Plant, Coating, Plastics
- PLASTICS, Coatings, Metals. See METALS, Coating, Plastics
- PLASTICS, Coatings, Partitions, Buildings. See BUILDINGS, Partitions, Coatings, Plastics
- PLASTICS, Coatings, Steel, Sheets. See SHEETS, Steel, Coatings, Plastics
- PLASTICS, Coatings, Strips, Steel. See STRIPS, Steel, Coatings, Plastics
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- PLASTICS, Containers, Transport, Food. See FOOD, Transport, Containers, Plastics
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PLASTICS, Hair dryers. See HAIR DRYERS, Plastics

PLASTICS, Housings, Animals, Laboratories. See LABORATORIES, Animals, Housings, Plastics

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PLASTICS, Paint. See PAINT, Alkyd resins

PLASTICS, Paint. See PAINT, Plastics

PLASTICS, Paint. See PAINT, Polyurethane

PLASTICS, Paint, Buildings. See BUILDINGS, Paint, Plastics

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**PLASTICS, Pipes. See PIPES, Plastics****PLASTICS, Pipes. See PIPES, Thermoplastics****PLASTICS, Portable electric drill components. See DRILLS, Electric, Portable, Components, Plastics****PLASTICS, Powders, Coating, Metals. See METALS, Coating, Powders, Plastics****PLASTICS, Powders, Coatings. See COATINGS, Powders, Plastics****PLASTICS, Prefabricated building materials**

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**PLASTICS, Prefabricated garages. See GARAGES, Prefabricated, Plastics****PLASTICS, Printing**

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**PLASTICS, Printing plates. See PRINTING, Plates, Plastics****PLASTICS, Radomes. See RADOMES, Plastics****PLASTICS, Rainwater goods. See RAINWATER GOODS, Plastic****PLASTICS, Reflectors, Aerials. See AERIALS, Reflectors, Plastics****PLASTICS, Reinforced**

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**PLASTICS, Reinforced**

Related Headings:

    EPOXY RESIN-GLASS FIBRE

    POLYESTER-GLASS FIBRE

**PLASTICS, Reinforced, Bodies, Commercial vehicles. See**

    VEHICLES, Commercial, Bodies, Plastics, Reinforced

**PLASTICS, Reinforced, Bodies, Motor cars. See MOTOR**

    CARS, Bodies, Plastics, Reinforced

**PLASTICS, Reinforced, Bodies, Motor vehicles. See MOTOR**

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**PLASTICS, Reinforced, Containers, Alcoholic beverages. See ALCOHOLIC BEVERAGES, Containers, Plastics, Reinforced****PLASTICS, Reinforced, Containers, Drinking water. See WATER, Drinking, Containers, Plastics, Reinforced****PLASTICS, Reinforced, Containers, Food. See FOOD, Containers, Plastics, Reinforced****PLASTICS, Reinforced, Containers, Freight. See FREIGHT, Containers, Plastics, Reinforced****PLASTICS, Reinforced, Corrosion, Resistance**

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**PLASTICS, Reinforced, Manufactures, Austria**

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**PLASTICS, Reinforced, Manufactures, Brazil**

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**PLASTICS, Reinforced, Manufactures, Spray up process**

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"Flomat" pre-pregs for press moulding. *Reinforced Plastics*, 8 (Feb 64) p.176-9. il.

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- PLASTICS, Reinforced-Glass fibre, Coatings, Tanks.** See TANKS, Coatings, Plastics, Reinforced-Glass fibre
- PLASTICS, Reinforced-Glass fibre, Containers.** See CONTAINERS, Plastics, Reinforced-Glass fibre
- PLASTICS, Reinforced-Glass fibre, Corrosion, Testing**  
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- PLASTICS, Reinforced-Glass fibre, Display cabinets, Frozen food.** See FOOD, Frozen, Display cabinets, Plastics, Reinforced, Glass fibre
- PLASTICS, Reinforced-Glass fibre, Engineering**  
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- PLASTICS, Reinforced-Glass fibre, Exhibition buildings.** See EXHIBITION BUILDINGS, Plastics, Reinforced-Glass fibre
- PLASTICS, Reinforced-Glass fibre, Filament winding, Rectangular**  
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- PLASTICS, Reinforced-Glass fibre, Filament winding (Tape) Machines**  
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- PLASTICS, Reinforced-Glass fibre, Fillers**  
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- PLASTICS, Reinforced-Glass fibre, Linings, Tanks.** See TANKS, Linings, Plastics, Reinforced-Glass fibre
- PLASTICS, Reinforced-Glass fibre, Machining, Diamond**  
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- PLASTICS, Roofing.** See ROOFING, Plastics
- PLASTICS, Rooflights.** See ROOFLIGHTS, Plastics
- PLASTICS, Sacks.** See SACKS, Plastic
- PLASTICS, Service stations, Motor vehicles.** See MOTOR VEHICLES, Service stations, Plastics
- PLASTICS, Shells, Encapsulation, Electronic components.** See ELECTRONICS, Components, Encapsulation, Shells, Plastics
- PLASTICS, Signs.** See SIGNS, Plastics
- PLASTICS, Spectrophotometry, Infra-red, Reflectance**  
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- PLASTICS, Spheres, Thermal insulation, Surfaces, Liquids.** See LIQUIDS, Surfaces, Insulation, Thermal, Spheres, Plastics
- PLASTICS, Stamping, Hot foil**  
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- PLASTICS, Strength, Testing**  
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- PLASTICS, Suspended ceilings.** See CEILINGS, Suspended, Plastics
- PLASTICS, Technical literature, Information services**  
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Information plasticization. J. MacLachlan. *Rubber J.*, 146 (Nov 64) p.56+
- PLASTICS, Testing**  
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- PLASTICS, Testing, Environmental**  
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- PLASTICS, Testing, Instruments**  
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- PLASTICS, Testing, Ultrasonics**  
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 PLASTICS, Thermosetting, Powders, Coatings. See COATINGS, Powders, Plastics, Thermosetting  
 PLASTICS, Toxicity, Food. See FOOD, Toxicity, Plastics

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PLASTICS, Tubes, Packaging. See PACKAGING, Tubes, Plastic

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#### PLASTICS, Welding, Spin

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PLATE COLUMNS, Distillation. See DISTILLATION, Columns, Plate

#### PLATE COLUMNS, Flow

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PLATE EVAPORATORS. See EVAPORATORS, Plate

PLATE HEAT EXCHANGERS. See HEAT, Exchangers, Plate type

PLATE HEAT EXCHANGERS, Milk pasteurisation. See MILK, Pasteurisation, Heat exchangers, Plate

PLATE JIGS. See JIGS, Plate

PLATE-MAKING, Colour photolithography. See PHOTO-LITHOGRAPHY, Colour, Plate-making

PLATE-MAKING, Photolithography. See PHOTOLITHO-GRAPHY, Plate-making

PLATE-MAKING, Printing. See PRINTING, Plate-making

PLATE ORIFICES. See ORIFICE PLATES

PLATENS, Tensile testing, Plaster. See PLASTER, Tensile testing, Platens

#### PLATES-SUBHEADINGS-Synopsis

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

Strength  
*Bending*

Technical activities  
*Bolting*

Materials  
*Metals*  
*Steel*  
*Aluminium alloy*  
*Composite*  
*Sandwich*

Parts  
*Joints*

Types of plates  
*Stiffened*  
*Perforated*  
*Holes*  
*Orthotropic*  
*Rectangular*  
*Square*  
*Skewed*  
*Circular*

Applications  
*Clutches*  
*Girders*

PLATES, Aluminium alloy, Aircraft structures. See AIR-CRAFT, Structures, Plates, Aluminium alloy

PLATES, Aluminium alloys, Inclusions, Oxides, Determination  
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PLATES, Aluminium (Tooling) See TOOLING, Plates, Aluminium

#### PLATES, Bending, Analogues, Grillages

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#### PLATES, Bolting, Pressure distribution

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#### PLATES, Circular, Bending moments

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#### PLATES, Circular, Ring supported, Loaded, Stresses, Effect of Poisson's ratio

Effect of Poisson's ratio on stress distributions. B. Kenny. Engineer, 218 (30 Oct 64) p.706-12. il. refs.

#### PLATES (Clutches) Metal, Sintered

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#### PLATES, Composite, Anisotropic, Bending

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PLATES, Cores, Transformers. See TRANSFORMERS, Cores, Plates

PLATES, Die. See DIES, Plates

PLATES, Folded, Roofs. See ROOFS, Plates, Folded

PLATES, Fuel elements, Nuclear reactors. See NUCLEAR REACTORS, Fuel elements, Plates



**PLATES (Girders) Web, Stiffeners, Buckling**

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**PLATES, Holes, Circular, Stresses**

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**PLATES, Joints, Pin, Stresses**

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**PLATES, Loaded waveguides. See WAVEGUIDES, Loaded, Plates****PLATES, Metals, Cracks, Edge, Cyclic loading**

Cyclic stress required to propagate edge cracks in eight materials. N. E. Frost & A. F. Greenan. *J. of Mechanical Engng. Science*, 6 (Sep 64) p.203-10. il. refs.

**PLATES, Metals, Expansion orifices, Refrigerators. See REFRIGERATORS, Expansion orifices, Plates, Metal****PLATES, Metals, Holes, Stresses, Tensile, Determination, Photoelasticity**

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**PLATES, Mild steel, Barriers, Rock-fill dams. See DAMS, Rock-fill, Barriers, Plates, Steel, Mild****PLATES, Nozzles, Gas turbines, Aircraft. See AIRCRAFT, Gas turbines, Nozzles, Plates****PLATES, Orthotropic, Rectangular, Bending**

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**POISONING**

Related Headings:

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**POLYTHENE COATED CARTONS, Milk.** See **MILK, Cartons, Polythene coated**

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**PORTS, Approach channels**

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**POST-TENSIONED CONCRETE, Beams.** See **BEAMS, Concrete, Post-tensioned**

**POST-TENSIONED LAMINATED WOOD, Beams.** See **BEAMS, Wood, Laminated, Post-tensioned**

**POTASSIUM, Catalysts, Cyclisation, Alkenylarenes.** See **ALKENYLARENES, Cyclisation, Catalysts, Potassium**

**POTASSIUM, Fruit.** See **FRUIT, Potassium content**

**POTASSIUM, Melting, Studies, Microscopy, Ultraviolet**

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**POTASSIUM t-BUTOXIDE, Effect on autoxidation, Diphenyl sulphoxide, Solutions, Hydrocarbons.** See **HYDROCARBONS, Solutions (Diphenyl sulphoxide) Autoxidation, Effect of potassium t-butoxide**

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**POTASSIUM DIFLUORIDE, Molten, Aluminium electrodes.** See **ELECTRODES, Aluminium, Molten potassium difluoride**

**POTASSIUM DIFLUORIDE, Molten, Platinum cathodes.** See **CATHODES, Platinum, Molten potassium difluoride electrolytes**

**POTASSIUM HYDROXIDE, Electrolytes, Platinum-Oxygen electrodes.** See **ELECTRODES, Platinum-Oxygen, Potassium hydroxide electrolytes**

**POTASSIUM HYDROXIDE, Reaction with hexachlorocyclopentadiene.** See **HEXACHLOROCYCLOPENTADIENE, Reaction with potassium hydroxide**

**POTASSIUM HYDROXIDE, Solutions, Cathodes.** See **CATHODES, Potassium hydroxide solutions**

**POTASSIUM HYDROXIDE-HYDROGEN PEROXIDE, Solutions, Rotating discs, Carbon cathodes.** See **CATHODES, Carbon, Rotating disc, Potassium hydroxide-Hydrogen peroxide solutions**

**POTASSIUM IODATE, Oxidation, Thiol groups, Dough, Flour.** See **FLOUR, Dough, Thiol groups, Oxidation, Potassium iodate**

**POTASSIUM IODIDE-ACETONITRILE.** See **ACETONITRILE-POTASSIUM IODIDE**

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**POTASSIUM NITRATE, Molten, Copper-Cupric oxide electrodes, Acid base potentiometric titrations.** See **POTENTIOMETRIC TITRATIONS, Acid base, Electrodes, Copper-Cupric oxide, Molten potassium nitrate**

**POTASSIUM NITRATE, Molten, Potentiometric titrations, Acids.** See **ACIDS, Potentiometric titrations, Molten potassium nitrate**

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**POTATOES, Drying (Air) Additives, Bisulphite ion distribution**

Penetration by and distribution of calcium and bisulphite ions during potato scalding and hot-air dehydration. D. J. McWeeny, J. P. Moody & H. S. Burton. *J. of Science of Food & Agriculture*, 15 (Apr 64) p.253-8. il. refs.

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POTENTIAL, Electrodes. See ELECTRODES, Potential

POTENTIAL, Ions, Impurities, Semiconductors. See SEMI-CONDUCTORS, Impurities, Ions, Potential

POTENTIAL, Probe, Effect on probe measurement, Electron energy distribution, Plasmas, Gas discharge electron tubes. See ELECTRON TUBES, Gas discharge, Plasmas, Electron energy distribution, Measurement, Probes, Effect of probe potential

POTENTIAL, Reversible, Molten silver nitrate electrolytes, Platinum anodes. See ANODES, Platinum, Molten silver nitrate electrolytes, Potentials, Reversible

POTENTIAL, Reversible, Molten silver nitrate electrolytes, Silver cathodes. See CATHODES, Silver, Molten silver nitrate electrolytes, Potentials, Reversible

POTENTIAL, Reversible, Potassium hydroxide electrolytes, Platinum-Oxygen electrodes. See ELECTRODES, Platinum-Oxygen, Potassium hydroxide electrolytes, Potentials, Reversible

POTENTIAL-SWEEP CHRONOAMPEROMETRY, Kinetic curves, First order chemical reactions. See CHEMICAL REACTIONS, First order, Kinetic curves, Potential-sweep chronoamperometry

POTENTIOMETERS, Ballistic electrometers. See ELECTROMETERS, Ballistic, Potentiometers

POTENTIOMETERS, Resistors. See RESISTORS, Potentiometers

**POTENTIOMETRIC TITRATIONS, Acid-base, Electrodes, Antimony**

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POTENTIOMETRIC TITRATIONS, Tetracene. See TETRACENE, Potentiometric titrations

POTENTIOSTATS, Corrosion studies, Chloride solutions, Steel alloys. See STEEL, Alloys, Corrosion (Chloride solutions) Studies, Potentiostats

POTENTIOSTATS, Corrosion studies, Sulphuric acid, Steel alloys. See STEEL, Alloys, Corrosion (Sulphuric acid) Studies, Potentiostats

**POTENTIOSTATS, Electrodes, Potential, Deviations, Effect of characteristic data**

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POTENTIOSTATS, Polarisation studies, Molten alkali carbonates, Stainless steel anodes. See ANODES, Steel, Stainless, Molten alkali carbonates, Polarisation, Studies, Potentiostats

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**POTTERY**

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**POTTERY**

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DUCKLINGS

**POULTRY, Freezing**New Douglas blast freezer. *Modern Refrigeration*, 67 (Jul 64) p.701-2. il.**POULTRY, Houses, Drainage, Lagoons**Indoor lagoons for poultry. C. Tetlaw. *Agriculture*, 71 (Jan 64) p.10-12. il.**POULTRY, Packaging, Film, Thermoplastics, Shrinkable**Packaging for poultry. M. D. Ranken. *Packaging*, 34 (Feb 64) p.56-7

Shrink-wrapping techniques for poultry and cheese.

*Packaging Rev.*, 84 (Mar 64) p.25-7**POURING, Casting, Pig iron. See IRON, Pig, Casting,**

Pouring

**POWDER METALLURGY**Developments in powder metallurgy. *Machinery*, 105 (23 Sep 64) p.731+Moulding with metal powders: the economics of powder metallurgy. *Inco-Mond Magazine* no.25 (1964) p.24-7. il.Some modern powder-compacted parts [Bound Brook Bearings, Ltd., Lichfield] A. W. Astrop. *Machinery*, 104 (8 Apr 64) p.806-10. il.Talking points in powder metallurgy (summary) *Metal Industry*, 105 (30 Jul 64) p.148-9**POWDER METALLURGY**

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**POWDER METALLURGY, Alnico, Magnets. See MAGNETS, Alnico, Powder metallurgy****POWDER METALLURGY, Amalgam. See AMALGAM, Powder metallurgy****POWDER METALLURGY, Beryllium. See BERYLLIUM, Powder metallurgy****POWDER METALLURGY, Boring bar manufactures. See BORING, Bars, Manufactures, Powder metallurgy****POWDER METALLURGY, Cobalt, Strips. See STRIPS, Cobalt, Powder metallurgy****POWDER METALLURGY, Cobalt-Platinum magnets manufactures. See MAGNETS, Cobalt-Platinum, Manufactures, Powder metallurgy****POWDER METALLURGY, Copper, Strips. See STRIPS, Copper, Powder metallurgy****POWDER METALLURGY, Cored wire electrodes, Sparking plugs. See SPARKING PLUGS, Electrodes, Cored wire, Powder metallurgy****POWDER METALLURGY, Extrusion, Hot**Hot extrusion of metal powders. C. R. Shakeseare & D. A. Oliver. *Powder Metallurgy*, 7 (Autumn 64) p.202-12. il. refs.**POWDER METALLURGY, Iron. See IRON, Powder metallurgy****POWDER METALLURGY, Iron-Copper. See IRON-COPPER, Powder metallurgy****POWDER METALLURGY, Products, Brazing**Brazing sintered powder compacts. T. Pritchard. *Machine Shop*, 25 (May 64) p.221-3. il.**POWDER METALLURGY, Products, Carburising**Surface treatment of sintered materials. L. Mitchell & C. Dawes. *Metal Treatment*, 31 (Nov 64) p.418-28. il. ref.**POWDER METALLURGY, Products, Mechanical properties, Effect of oxide films**Influence of thin oxide films on the mechanical properties of sintered metal-powder compacts. P. Ramakrishnan & G. S. Tendolkar. *Powder Metallurgy*, 7 (Spring 64) p.34-49. il. refs.**POWDER METALLURGY, Shanks, Cutters, Machine tools.**

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**POWDER METALLURGY, Stainless steel, Strips. See**

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**POWDER METALLURGY, Stannous oxide-Tin, Rods. See**

RODS, Tin-Stannous oxide, Powder metallurgy

**POWDER METALLURGY, Steel. See STEEL, Sintered****POWDER METALLURGY, Tungsten. See TUNGSTEN,**

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**POWDER PHOTOGRAPHS, Diffraction, X-rays. See X-RAYS,**

Diffraction, Powder photographs

**POWDERED CARAMEL. See CARAMEL, Powdered****POWDERS, Aluminium, Solid propellant additives. See**

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**POWDERS, Coatings, Metals. See METALS, Coating, Powders****POWDERS, Coatings, Roof racks, Motor cars. See MOTOR**

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- PRESS TOOLS**
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See BEARINGS, Ball, Cages, Ribbon, Machining, Transfer presses

**PRESSES, Vulcanisation, Rubber. See RUBBER, Vulcanisation, Presses****PRESSES, Web-offset, Lithography. See LITHOGRAPHY, Web-offset, Presses****PRESSING, Hot, Joining, Alumina pipes. See PIPES, Alumina, Joining, Hot-pressing****PRESSING, Hot, Powder metallurgy, Beryllium. See BERYLLIUM, Powder metallurgy, Hot pressing****PRESSING, Hot, Powders. See POWDERS, Hot pressing****PRESSURE**

Related Headings:

HIGH PRESSURE

**PRESSURE, Air. See AIR, Pressure****PRESSURE, Corrosive gases. See GASES, Corrosive, Pressure****PRESSURE, Curing, Adhesives, Wood manufacture. See WOOD, Manufactures, Adhesives, Curing, Pressure****PRESSURE, Distribution, Bolting, Plates. See PLATES, Bolting, Pressure distribution****PRESSURE, Effect on combustion products, Natural gas. See GAS, Natural, Combustion products, Effect of pressure perturbation****PRESSURE, Effect on dielectric constant, Diamond. See DIAMONDS, Dielectric constant, Effect of pressure****PRESSURE, Effect on unfrozen water content, Frozen soil. See SOIL, Frozen, Water content, Unfrozen, Effect of pressure****PRESSURE, Exchangers**

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**PRESSURE, Gas, Shock tubes. See SHOCK TUBES, Gas, Pressure****PRESSURE, Gauges, Boilers, Steam heating, Buildings. See BUILDINGS, Heating, Steam, Boilers, Pressure gauges****PRESSURE, Gauges, Sensing capsules**

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MANOMETERS

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**PRESSURE, Regulators, Compressed air. See AIR, Compressed, Pressure regulators****PRESSURE, Soil mechanics. See SOIL MECHANICS, Pressure****PRESSURE, Testing, Corners, Ducts, Cooling systems, Gas cooled nuclear reactors. See NUCLEAR REACTORS, Gas cooled, Cooling systems, Ducts, Corners, Pressure testing****PRESSURE, Transducers**

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**PRESSURE SHELLS**, Submarine structures. See **SUBMARINE STRUCTURES**, External pressure shells

**PRESSURE SUITS**, Moon flights, Astronautics. See **ASTRONAUTICS**, Flights, Moon, Pressure suits

**PRESSURE SURGES**, Centrifugal pumps, Water. See **WATER**, Pumps, Centrifugal, Pressure surges

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**PRESSURE WELDING**. See **WELDING**, Pressure

**PRESSURISATION**, Flammable atmosphere lighting equipment. See **LIGHTING**, Flammable atmospheres, Equipment, Pressurisation

**PRESSURISED ELECTRICAL CONDUITS**. See **CONDUITS**, Electrical, Pressurised



**PRESSURISED OIL FILM JOURNAL BEARINGS**, Machine tools. See **MACHINE TOOLS**, Bearings, Journal Pressurised oil film

**PRESSURISED OIL FILM LEADSCREWS**, Machine tools. See **MACHINE TOOLS**, Leadscrews, Pressurised oil film

**PRESSURISED WATER NUCLEAR REACTORS**. See **NUCLEAR REACTORS**, Pressurised water

**PRESSURISED WATER NUCLEAR REACTORS**, Ships. See **SHIPS**, Nuclear propulsion, Reactors, Pressurised water

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**PRESSWORKING, Mitred joints, Cores, Transformers**. See **TRANSFORMERS**, Cores, Joints, Mitred, Pressworking

**PRESSWORKING, Motor car parts**. See **MOTOR CARS**, Parts, Pressworking

**PRESTON**  
See  
PORTS, Preston  
SHOPPING CENTRES, Preston

**PRESTRAINED COPPER PIPES**. See **PIPES**, Copper, Prestained

**PRESTRAINED MILD STEEL**. See **STEEL**, Mild Prestained

**PRESTRAINED NICKEL**. See **NICKEL**, Prestained

**PRESTRESSED CONCRETE**. See **CONCRETE**, Prestressed

**PRESTRESSED CONCRETE, Beams**. See **BEAMS**, Concrete, Prestressed

**PRESTRESSED CONCRETE, Beams, Elevated roads**. See **ROADS**, Elevated, Beams, Concrete, Prestressed

**PRESTRESSED CONCRETE, Bridges**. See **BRIDGES**, Concrete, Prestressed

**PRESTRESSED CONCRETE, Buildings**. See **BUILDINGS**, Concrete, Prestressed

**PRESTRESSED CONCRETE, Frames, Structures**. See **STRUCTURES**, Frames, Concrete, Prestressed

**PRESTRESSED CONCRETE, Piles**. See **PILES**, Concrete, Prestressed

**PRESTRESSED CONCRETE, Pressure vessels, Nuclear reactors**. See **NUCLEAR REACTORS**, Pressure vessels, Concrete, Prestressed

**PRESTRESSED CONCRETE, Tanks, Sludge digestion**. See **SLUDGE**, Digestion, Tanks, Concrete, Prestressed

**PRESTRESSED STEEL, Girders, Elevated roads**. See **ROADS**, Elevated, Girders, Steel, Prestressed

**PRESTWICK**  
See  
AIRPORTS, Terminal buildings, Prestwick

**PRETENSIONED CONCRETE**, Hollow box beams, Underpasses. See **UNDERPASSES**, Beams, Hollow box, Concrete, Pretensioned

**PRE-TENSIONED CONCRETE, Piles**. See **PILES**, Concrete, Pre-tensioned

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Related Headings:

ELECTRIC MOTORS  
ENGINES  
NUCLEAR ENERGY  
NUCLEAR PROPULSION  
ROCKETS  
SOLAR ENERGY  
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PRIMING, Paint. See **PAINT**, Priming

PRIMING, Paint, Bodies, Motor vehicles. See **MOTOR VEHICLES**, Bodies, Paint, Primers

PRIMING, Paint, Steel. See **STEEL**, Paint, Priming

PRIMING, Paint, Steel plates, Ships. See **SHIPS**, Plates, Steel, Paint, Priming

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**PRINTING**

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COLLOTYPE  
COMPOSING, Printing  
COMPOSING, Rooms  
DIE STAMPING, Printing  
ELECTROTYPES  
ENGRAVING  
ETCHING  
FLEXOGRAPHY  
ILLUSTRATIONS  
IMPOSITION  
LITHOGRAPHY  
PHOTOENGRAVING  
PHOTOGRAVURE  
PRESSWORK  
SILK SCREEN PRINTING  
THERMOGRAPHY  
TYPE-FACES  
TYPE FOUNDING

**PRINTING—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

## Particular localities

Great Britain  
    *Manchester*  
Germany  
    *East Germany*  
    *Switzerland*  
Czechoslovakia  
U.S.A.

## Education

*Teaching*

## Research

## Costs

## Works

Equipment  
    *Machines*  
    *Control systems*  
    *Instruments*  
        *Densitometers*

## Plates

*Plate making*

## Paper

## Inks

## Technical activities

*Design*  
*Production, Control*  
*Mechanical handling*  
*Make-ready*  
    *Packing*  
*Laminating*  
Specialties  
    *Colour*

**PRINTING—SUBHEADINGS—Synopsis—cont.**

## Systems

*Dry offset*  
*Electrostatic*  
*Inkless*

PRINTING, Acrylic fibres, Fabrics. See FABRICS, Acrylic fibres, Printing

PRINTING, Adhesive tape. See TAPE, Adhesive, Printing  
PRINTING, Advertisements. See ADVERTISEMENTS, Printing

PRINTING, Bibles. See BIBLES, Printing

PRINTING, Books. See BOOKS, Printing

PRINTING, Calendars. See CALENDARS, Printing

PRINTING, Cartons. See CARTONS, Printing

PRINTING, Catalogues, Exhibitions. See EXHIBITIONS, Catalogues, Printing

PRINTING, Cellulosic fabrics. See FABRICS, Cellulosic, Printing

**PRINTING, Colour**

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**PRINTING, Colour, Monitoring, Instruments**

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PRINTING, Colour, Newspapers. See NEWSPAPERS, Printing, Colour

PRINTING, Colour, P.V.C., Tubing, Containers. See CONTAINERS, Tubing, P.V.C., Printing, Colour

PRINTING, Colour photography. See PHOTOGRAPHY, Colour, Printing

**PRINTING, Control systems**

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PRINTING, Corrugated board, Containers. See CONTAINERS, Board, Corrugated, Printing

**PRINTING, Costs**

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PRINTING, Courtelle, Fabrics. See FABRICS, Courtelle, Printing

**PRINTING, Czechoslovakia**

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**PRINTING, Densitometers**

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- Further outlook—bright! J. M. Fairfield. *Litho-Printer*, 7 (Nov 64) p.53-7. il.
- Offset letterpress. W. R. Durrant. *Brit. Printer*, 77 (Oct 64) p.76-86. il.
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- PRINTING, Dry offset, Packaging materials. See PACKAGING, Materials, Printing, Dry offset
- PRINTING, Dry offset, Plastics, Containers. See CONTAINERS, Plastics, Printing, Dry offset

**PRINTING, East Germany**

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**PRINTING, Education**

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**PRINTING, Education, Buildings**

- London's latest printing landmark. *Brit. Printer*, 77 (Aug 64) p.64-71. il.
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**PRINTING, Education (Management)**

- Some thoughts on the selection & training of managers. R. Gavron. *Brit. Printer*, 77 (Aug 64) p.79-85. il.

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- PRINTING, Electrostatic, Fabrics. See FABRICS, Printing, Electrostatic

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**PRINTING, Electrostatic, Machines**

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- PROJECTS, Laboratories, Education, Electrical engineering. See ELECTRICAL ENGINEERING, Education, Laboratories, Projects
- PROMOTERS, Drop condensation, Steam. See STEAM, Condensation (Drop) Promoters
- PROOFS, Photolithography. See PHOTOLITHOGRAPHY, Proofs
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- PROPANE, Fuel cells. See FUEL CELLS, Propane
- PROPANE, Heating, Mobile cinemas. See CINEMAS, Mobile, Heating, Propane-fired
- PROPANE-AIR, Flames. See FLAMES, Propane-Air
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- PROPANE-OXYGEN, Fuel cells. See FUEL CELLS, Propane-Oxygen
- PROPANE-OXYGEN, Lances, Direct reduction, Iron production. See IRON, Production, Direct reduction, Oxygen-propane lances
- PROPANOL. See PROPYL ALCOHOL
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**QUATERNARY AMMONIUM SALTS**. See **AMMONIUM SALTS**, Quaternary

**QUATERNARY AMMONIUM SALTS**, Disinfectants, Microbiology, Food processing. See **FOOD**, Processing, Microbiology, Disinfectants, Quaternary ammonium salts

**QUAYS**, Loading, Coal. See **COAL**, Loading, Quays

## **QUEBEC PROVINCE**

See

AIR POLLUTION, Smoke, Montreal

HYDROELECTRIC POWER STATIONS, Manicouagan

ZINC, Mining, Mattagami

## **QUEENSLAND**

See

GAS, Natural, Queensland

PAINT, Pigments, Lead, Queensland

**QUENCH AGEING**, Mild steel, Wires. See **WIRES**, Steel, Mild, Ageing, Quench

**QUENCHED ALUMINIUM ALLOYS**. See **ALUMINIUM**, Alloys, Quenched

**QUENCHED COPPER**. See **COPPER**, Quenched

**QUENCHED GOLD**. See **GOLD**, Quenched

**QUENCHED SILVER**. See **SILVER**, Quenched

**QUENCHED SILVER-ZINC**. See **SILVER-ZINC**, Quenched

**QUENCHED URANIUM**, Fuels, Nuclear reactors. See

**NUCLEAR REACTORS**, Fuels, Uranium, Quenched

**QUENCHING**, Ball bearings. See **BEARINGS**, Ball, Quenching

**QUENCHING**, Effect on microstructure, Chrome-magnesite.

See **CHROME-MAGNESITE**, Refractories, Microstructure, Effect of quenching

**QUENCHING**, Electroluminescence, Zinc sulphide-Copper.

See **ZINC SULPHIDE-COPPER**, Electroluminescence, Effect of quenching

**QUENCHING**, Gold. See **GOLD**, Quenching

**QUENCHING**, Liquid scintillation counting, Low level beta

radiation. See **BETA RADIATION**, Low level, Scintillation counting, Liquid, Quenching

**QUENCHING**, Precipitation hardened steel. See **STEEL**, Precipitation hardened, Quenching

**QUENCHING**, Steel. See **STEEL**, Quenching



**QUEUE THEORY**

Some numerical data for single-server queues involving deterministic input arrangements. B. Barber. *Operational Research Q.*, 15 (Jun 64) p.107-15. il. refs.

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**QUICK-FROZEN CHIPS**, Potatoes. See **POTATOES**, Chips, Quick-frozen

**QUICK-FROZEN FISH**. See **FISH**, Quick-frozen

**QUICK-FROZEN FOOD**. See **FOOD**, Quick-frozen

**QUICK-FROZEN FRUIT**. See **FRUIT**, Quick-frozen

**QUICK-FROZEN MEAT**. See **MEAT**, Quick-frozen

**QUICK-FROZEN VEGETABLES**. See **VEGETABLES**, Quick-frozen

**QUIKBUILD SYSTEM**, Prefabrication, Housing. See **HOUSING**, Prefabrication, Quikbuild system

**QUINOL**. See **HYDROQUINONE**

**QUINOLINE**

Related Headings:

ISOQUINOLINE

**"R & S" SYSTEM**, Prefabricated industrial buildings. See **INDUSTRIAL BUILDINGS**, Prefabricated, "R & S" system

**RDX**. See **CYCLONITE**

**R.F.**, Excitation, Oxygen, Ashing, Organic materials. See **ORGANIC MATERIALS**, Ashing, Oxygen, R.F. excitation

**R.F.**, Heating. See **HEATING**, Dielectric

**R.F.**, Heating, Curing, Adhesives, Joinery. See **JOINERY**, Adhesives, Curing, Heating, R.F.

**R.F.**, Heating, Curing, Adhesives, Lipping, Fibre board. See **FIBRE BOARD**, Lipping, Adhesives, Curing, Heating, R.F.

**R.F.**, Heating, Curing, Adhesives, Wood manufactures. See **WOOD**, Manufactures, Adhesives, Curing, Heating, R.F.

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**RACING CARS**. See **MOTOR CARS** (Racing)

**RACING MOTOR BOATS**. See **BOATS**, Motor (Racing)

**RACK TRAMWAYS**. See **TRAMWAYS**, Rack

**RACKS**, Mounting, Electronic equipment. See **ELECTRONIC EQUIPMENT**, Mounting, Racks

**RACKS**, Mounting, Electronic equipment, Data logging. See **DATA LOGGING**, Electronic equipment, Mounting, Racks

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# **RADAR, Sidelooking, Navigation systems, Aircraft. See AIRCRAFT, Navigation systems, Radar, Sidelooking**

# **RADAR, Speed limit checks, Roads. See ROADS, Speed limits, Radar checks**

# **RADAR, Thickness measurement, Ice shelves. See ICE SHELVES, Thickness, Measurement, Radar**

# **RADAR, Tracking, Aircraft. See AIRCRAFT, Tracking, Radar**

# **RADAR, Tracking, Missiles. See MISSILES, Tracking, Radar**

# **RADAR, Traffic control, Air transport. See AIR TRANSPORT, Traffic control, Radar**

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# **RADIAL GRATINGS, Gear testing. See GEARS, Testing, Radial gratings**

# **RADIAL JETS, Free. See JETS, Radial, Free Radiant**

# **RADIAL PLY TYRES, Motor cars. See MOTOR CARS, Tyres, Radial ply**

# **RADIANT HEAT, Singeing, Fabrics. See FABRICS, Singeing, Radiant heat**

# **RADIANT HEATING, Houses. See HOUSES, Heating, Radiant**

# **RADIANT TUBES, Gas-fired furnaces. See FURNACES, Gas-fired, Radiant tubes**

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# **RADIATION PYROMETERS. See PYROMETERS, Radiation**

# **RADIATION PYROMETERS, Temperature measurements, Hot extrusion, Aluminium. See ALUMINIUM, Extrusion, Hot, Temperature, Measurements, Pyrometers, Radiation**

# **RADIATION THERMAL CRACKING, Petrochemical olefin production. See OLEFINS, Petrochemicals, Production, Radiation thermal cracking**

# **RADIATIONS**

Related Headings:

INFRA-RED RADIATION

IRRADIATION

PHOTON DRAG

RADIOACTIVITY

RADIOGRAPHY

ULTRAVIOLET RADIATION

X-RAYS

# **RADIATIONS, Effect on organic chemicals. See ORGANIC CHEMICALS, Irradiation**

# **RADIATIONS, Heat. See HEAT, Radiation**

# **RADIATIONS, Luminous dials, Watches. See WATCHES, Dials, Luminous, Radiations**

# **RADIATIVE CAPTURE, Neutrons. See NEUTRONS, Captive, Radiative**

# **RADIATORS**

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# **RADIATORS, Electric, Manufactures, Conveyors**

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**RADICALS**, Free. See **FREE RADICALS**  
**RADICALS**, Free, Recombination, Low temperature hydrogen-oxygen-nitrogen flames. See **FLAMES**, Hydrogen-Oxygen-Nitrogen, Low temperature, Free radicals recombination

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**RADIO**

Related Headings:  
**CONTROL**, Remote  
**RADAR**

**RADIO-SUBHEADINGS-Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

History  
 Organisations  
 Research

Problems  
*Interference*  
*Transmission*  
*Waves*  
*Frequencies*

Equipment  
*Electron tubes*  
*Amplifiers*  
*Exciters*  
*Stations*  
*Transceivers*  
*Transmitters*  
*Receivers*  
*Monitors*  
*Transmit-receive switching*

Systems  
*V.L.F.*  
*L.F.*  
*M.F.*  
*H.F.*  
*V.H.F.*  
*Microwave*  
*U.H.F.*  
*Single sideband*  
*Frequency modulation*  
*Stereo*  
*Wired*  
 Ancillaries  
*Studios*

Applications  
*Communication*  
*Personal calling systems*  
*Ship-Shore services*  
*Astronomy*  
*Teaching*

**RADIO, Amplifiers, Audio frequency, Transistor**

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**RADIO, Amplifiers, Transistor**

Transistor r.f. power amplifiers: some typical designs using silicon planar transistors. M. V. Bond. *Wireless World*, 70 (Dec 64) p.594-600. il.

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**RADIO**, Beams, Instruments, Landing. See **LANDING**, Instruments, Radio beams

**RADIO**, Communications, Buses. See **BUSES**, Communications, Radio

**RADIO**, Communications, Coal mining. See **COAL**, Mining, Communications, Radio

**RADIO, Communications, H.F.**

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**RADIO, Communications, H.F., Ionosphere sounding equipment, Oblique incidence**

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**RADIO, Communications, H.F., Receivers**

Marconi self-tuning HF transmitting system. D. Aldous. *International Broadcast Engr.* (Oct 64) p.36+. il.

**RADIO, Communications, H.F., Transmitters, Modulated signals, Generators**

Generation of modulated signals for h.f. transmitters. H. Haywood & B. M. Sosin. *Point to Point Telecommunications*, 8 (Jun 64) p.35-47. il. refs.

**RADIO, Communications, Microwave, English Channel**

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**RADIO, Communications, Microwave, Interference, Communication satellites**

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Mutual interference between communication satellites and terrestrial line-of-sight radio-relay systems. J. K. Chamberlain & R. G. Medhurst. *Proc. of Instn. of Electrical Engrs.*, 3 (Mar 64) p.524-34. il. refs.

**RADIO**, Communications, Microwave, Interference sources, Communication satellites. See **SATELLITES**, Artificial, Communication, Interference, Terrestrial microwave links

**RADIO**, Communications, Multichannel, Filters, Waveguide  
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**RADIO, Communications, Multichannel, Subcarriers, L.F., Discriminators**

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**RADIO, Communications, Receivers**

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**RADIO**, Altimeters, Flight control systems. See **FLIGHT CONTROL SYSTEMS**, Altimeters, Radio



**RADIO, Communications, Receivers, Aerials, Noise**

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**RADIO, Communications, Transmitters, Power supplies, Rectifiers, Mercury arc, Testing, Instruments**

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**RADIO, Communications, Tropospheric scatter**

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Tropospheric scatter multichannel communications. D. B. Kennett. *Point to Point Telecommunications*, 8 (Feb 64) p.35-54. il. refs.

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Meteorological factors in radiocommunications at very short wave-lengths. R. L. Smith-Rose. *Nature*, 204 (7 Nov 64) p.518-22. refs.

**RADIO, Education, Architecture. See ARCHITECTURE, Education, Radio****RADIO, Electron tubes, History**

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**RADIO, Equipment**

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**RADIO, Equipment, Aircraft**

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**RADIO, Equipment (Aircraft) Interference, Electrical equipment**

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**RADIO, Equipment (Aircraft) Receivers, Marker, Microminiature circuits**

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Extending the range of vhf communications. E. H. Bruce-Clayton. *Aeroplane & Commercial Aviation News*, 108 (8 Oct 64) p.27

**RADIO, Equipment (Aircraft) V.H.F., Receivers, Transistor**

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**RADIO, Equipment, Boats**

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**RADIO, Equipment, Frequency, Measurement, Oscillators—Multivibrators**

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**RADIO, Equipment, High voltages, Measurement, Instruments**

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**RADIO, Equipment, Light aircraft. See AIRCRAFT (Light) Radio equipment****RADIO, Equipment, Measurements, Ammeters**

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**RADIO, Equipment, Measurements, Bridges**

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**RADIO, Equipment, Measurements, Multimeters**

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**RADIO, Equipment, Organisations**

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**RADIO, Equipment, Police. See POLICE, Communications, Radio****RADIO, Equipment, Power supplies, Rectifiers, Semiconductors**

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**RADIO, Equipment, Testing, Meters**

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**RADIO, Equipment, Tuned circuits, Measurement, Instruments**

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- RADIOISOTOPES, Foundry practice. See FOUNDRY PRACTICE, Radioisotopes
- RADIOISOTOPES, Fractional distillation studies, Cadmium-Zinc, Cadmium production. See CADMIUM, Production, Cadmium-Zinc, Distillation, Fractional, Studies, Radioisotopes
- RADIOISOTOPES, Glass-Tricresyl phosphate reaction studies. See TRICRESYL PHOSPHATE, Reaction with glass, Studies, Radioisotopes
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- RADIOISOTOPES, Instruments, Control systems. See CONTROL SYSTEMS, Instruments, Radioisotopes
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- RADIOISOTOPES, Wear studies, Rolling contact. See ROLLING CONTACT, Wear, Studies, Radioisotopes

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RAILS, Curved, Permanent way, Flange forces, Wheels, Wagons, Railways. See RAILWAYS, Wagons, Wheels, Flange forces, Curved track

RAILS, Hand. See HANDRAILS

RAILS, Hovercraft. See HOVERCRAFT, Rail guided

RAILS, Open sections, Underground railways. See RAILWAYS, Underground, Open sections, Rails

RAILS, Permanent way. See PERMANENT WAY, Rails

RAILS, Welded, Open sections, Underground railways. See RAILWAYS, Underground, Open sections, Rails, Welded

RAILS, Welded, Permanent way. See PERMANENT WAY, Rails, Welded

RAILTON LIGHT SPORTS TOURER CARS. See MOTOR CARS, Types, Railton Light Sports Tourer

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SHIPS (Train carrying)

**RAILWAY-FERRY SYSTEMS, Italy**

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MONORAILS  
ROLLING STOCK, Passenger, Railways  
ROLLING STOCK, Railways  
TRAINS

**RAILWAYS-SUBHEADINGS-Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

*History***Particular localities**

*Great Britain*  
*England*

*London*  
*Gloucestershire*  
*Birmingham-Gloucester*  
*Liverpool-Manchester*  
*Spenn Valley*  
*Cumberland*

*Wales*  
*Ffestiniog*

*Scotland*  
*Ireland*

*Europe*  
*Western Europe*  
*France*  
*Germany*  
*Western Germany*  
*Switzerland*  
*Denmark*  
*Spain*  
*Italy*

**Asia**

*India*  
*Japan*

**Africa**

*Tunisia*  
*Angola*  
*South Africa*  
*Swaziland*  
*Rhodesia*

**North America**

*Canada*  
*Newfoundland*

**South America**

*British Guiana*  
*New Zealand*

**Research**

*Laboratories*

**Problems**

*Safety*  
*Accidents*  
*Damage*

**Construction****Operation**

*Civil engineering*

**Equipment**

*Electrical equipment*  
*Electronic equipment*  
*Control systems*  
*Communications*  
*Telephony*  
*Radar*  
*Signalling systems*

**Maps**

*Booking systems*  
*Seat reservation*

## RAILWAYS—SUBHEADINGS—Synopsis—cont.

## Vehicles

Wagons  
Vans

## Structures

Buildings  
Architecture  
Stations  
Workshops

## Bridges

Drawbridges  
Tunnels  
Piers

## Facilities

Level crossings  
Marshalling yards

## Types

Narrow gauge  
Electric  
Electrification  
Underground  
Suburban

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Accident report: van derailment and collision [April 3, 1963, at Weedon, West Coast Main Line, London Midland Region] *Railway Gaz.*, 120 (7 Feb 64) p.121

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Overtaking collision between freight and passenger train [collision between Desborough & Rothwell Station and Glendon & Rushton Station, London Midland Region, July 3, 1963] *Railway Gaz.*, 120 (3 Jan 64) p.34

Overtaking collision between two freight trains [Rounton Gate, North Eastern Region, British Railways, 27th July 1963] *Railway Gaz.*, 120 (3 Apr 64) p.289. il.

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MAGNESIOWUSTITE  
MAGNESIUM OXIDE  
MULLITE  
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SILICON CARBIDE, Refractories  
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**REFRIGERANTS**

Related Headings:

CARBON DIOXIDE, Solid

CHLOROFLUOROHYDROCARBONS, Refrigerants

**REFRIGERATED BARGES. See BARGES, Refrigerated****REFRIGERATED COMMERCIAL VEHICLES. See VEHICLES, Commercial, Refrigerated****REFRIGERATED COMMERCIAL VEHICLES, Transport, Food. See FOOD, Transport, Commercial vehicles, Refrigerated****REFRIGERATED CONTAINERS, Transport, Food. See FOOD, Transport, Containers, Refrigerated****REFRIGERATED DELIVERY VEHICLES. See VEHICLES (Delivery) Refrigerated****REFRIGERATED FISHING VESSELS. See FISHING, Vessels, Refrigerated****REFRIGERATED FRUIT CARRYING SHIPS. See SHIPS, Fruit-carrying, Refrigerated****REFRIGERATED MOTOR VEHICLES. See MOTOR VEHICLES, Refrigerated****REFRIGERATED SEMI-TRAILERS, Articulated vehicles, Transport, Food. See FOOD, Transport, Motor vehicles, Articulated, Semi-trailers, Refrigerated****REFRIGERATED SHIPS. See SHIPS, Refrigerated****REFRIGERATED STERN TRAWLERS. See TRAWLERS (Stern) Refrigerated****REFRIGERATED TRAINS. See TRAINS, Freight, Refrigerated****REFRIGERATED TRAWLERS. See TRAWLERS, Refrigerated****REFRIGERATION**

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COLD STORES

FREEZE-DRIED

FREEZE-DRYING

FREEZING

FROZEN

QUICK FROZEN

SEA-FROZEN

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Quality of river water as a factor in the determination of minimum acceptable flows. A. L. Lyon. *Inst. of Water Engrs. J.*, 18 (May 64) p.215-18. refs.

**RIVERS, Water utilisation**

Successive re-use of river water: its effects & its limitations. M. Nixon. *Inst. of Water Engrs. J.*, 18 (May 64) p.225-31. refs.

Successive re-use of river water: its effects & its limitations. R. C. Hoatthe. *Inst. of Water Engrs. J.*, 18 (May 64) p.232-8. refs.

**RIVETING, Machines**

Tomkins-Johnson riveting and clinching machines.  
*Machinery*, 104 (25 Mar 64) p.718-19. il.

**RIVETS**

Modern riveting practice. J. M. A. Paterson. *Sheet Metal Industries*, 41 (Mar 64) p.200+. il.

**RIVETS, Thermoplastics**

Production riveting, pt.3: plastic rivets. *Light Production Engng.*, 2 (Jan 64) p.8-9. il.

**ROAD ROLLERS, Vibratory compaction**

Vibratory compaction rollers. W. A. Owen. *Machinery Lloyd* (European ed.) 36 (Sep 64) p.37-40. il.

Vibratory compaction rollers. W. A. Owen. *Machinery Lloyd* (Overseas ed.) 36 (12 Sep 64) p.41-4. il.

ROAD TANKERS. See **TANKERS, Road**

ROAD TANKERS, Collection, Milk. See **MILK, Collection, Road tankers**

ROAD TANKERS, Transport, Benzene. See **BENZENE, Transport, Road tankers**

ROAD TANKERS, Transport, Warm meal, Groundnuts. See **GROUNDNUTS, Meal, Warm, Transport, Tankers, Road**

ROAD TESTS, A.E.C. Marshal 2GM6RAS commercial vehicles. See **VEHICLES, Commercial, Types, A.E.C. Marshal 2GM6RAS, Road tests**

ROAD TESTS, A.E.C. "Marshal" lorries. See **LORRIES, Types, A.E.C. "Marshal", Road tests**

ROAD TESTS, Albion Chieftain Super Six-Scammell articulated vehicles. See **MOTOR VEHICLES, Articulated, Types, Albion Chieftain Super Six-Scammell, Road tests**

ROAD TESTS, Alfa Romeo Giulia 1600 Spider cars. See **MOTOR CARS, Types, Alfa Romeo Giulia 1600 Spider, Road tests**

ROAD TESTS, Ambulances. See **AMBULANCES, Road tests**

ROAD TESTS, Ariel Arrow 200 motor cycles. See **MOTOR CYCLES, Types, Ariel Arrow 200, Road tests**

ROAD TESTS, Ariel Leader motor cycles. See **MOTOR CYCLES, Types, Ariel Leader, Road tests**

ROAD TESTS, Ariel Sports Super Arrow motor cycles. See **MOTOR CYCLES, Types, Ariel Sports Super Arrow, Road tests**

ROAD TESTS, Aston Martin DB5 cars. See **MOTOR CARS, Types, Aston Martin DB5, Road tests**

ROAD TESTS, Austin 1800 de luxe motor cars. See **MOTOR CARS, Types, Austin 1800 de luxe, Road tests**

ROAD TESTS, Austin A110 Westminster Mk.2 cars. See **MOTOR CARS, Types, Austin A110 Westminster Mk.2, Road tests**

ROAD TESTS, Austin FH 7-ton lorries. See **LORRIES, Types, Austin FH 7-ton, Road tests**



- ROAD TESTS, Austin-Healey 3000 MK 111 Sports Convertible cars. See MOTOR CARS, Types, Austin-Healey 3000 Mk III Sports Convertible, Road tests
- ROAD TESTS, Austin-Healey Sprite Mk.3 cars. See MOTOR CARS, Types, Austin-Healey Sprite Mk.3, Road tests
- ROAD TESTS, Austin-Minatic 7 articulated vans. See VANS, Articulated, Types, Austin-Minatic 7, Road tests
- ROAD TESTS, Austin Mini Countryman estate cars. See ESTATE CARS, Types, Austin Mini Countryman, Road tests
- ROAD TESTS, B.M.W. 700LS motor cars. See MOTOR CARS, Types, B.M.W. 700LS, Road tests
- ROAD TESTS, B.M.W. 1800 Saloon cars. See MOTOR CARS, Types, B.M.W. 1800 Saloon, Road tests
- ROAD TESTS, B.S.A. A 50 Star motor cycles. See MOTOR CYCLES, Types, B.S.A. A 50 Star, Road tests
- ROAD TESTS, B.S.A. A65L Lightning motor cycles. See MOTOR CYCLES, Types, B.S.A. A65L Lightning, Road tests
- ROAD TESTS, B.S.A. A65 Rocket motor cycles. See MOTOR CYCLES, Types, B.S.A. A65 Rocket, Road tests
- ROAD TESTS, B.S.A. Beagle motor cycles. See MOTOR CYCLES, Types, B.S.A. Beagle, Road tests
- ROAD TESTS, B.S.A. D7 "Bantam Super" motor cycles. See MOTOR CYCLES, Types, B.S.A. D7 "Bantam Super", Road tests
- ROAD TESTS, B.S.A. Sunbeam scooters. See SCOOTERS, Types, B.S.A. Sunbeam, Road tests
- ROAD TESTS, Bedford Beagle estate cars. See ESTATE CARS, Types, Bedford Beagle, Road tests
- ROAD TESTS, Bedford CAL Mk. 2 vans. See VANS, Types, Bedford CAL Mk.2, Road tests
- ROAD TESTS, Bedford-Hawson 3-ton vans. See VANS, Types, Bedford-Hawson 3-ton, Road tests
- ROAD TESTS, Bluebird Highwayman caravans. See MOTOR CARAVANS, Types, Bluebird Highwayman, Road tests
- ROAD TESTS, Bond Equipe G.T. cars. See MOTOR CARS, Types, Bond Equipe G.T., Road tests
- ROAD TESTS, Cadillac Coupe de Ville 63 Series cars. See MOTOR CARS, Types, Cadillac Coupe de Ville 63 Series, Road tests
- ROAD TESTS, Cars. See MOTOR CARS, Road tests
- ROAD TESTS, Chevrolet Corvette Sting Ray cars. See MOTOR CARS, Types, Chevrolet Corvette Sting Ray, Road tests
- ROAD TESTS, Chevrolet Impala cars. See MOTOR CARS, Types, Chevrolet Impala, Road tests
- ROAD TESTS, Citroen DW cars. See MOTOR CARS, Types, Citroen DW, Road tests
- ROAD TESTS, Commer CBEW 1294-Hands articulated vehicles. See MOTOR VEHICLES, Articulated, Types, Commer CBEW 1294-Hands, Road tests
- ROAD TESTS, Commer lorries. See LORRIES, Types, Commer, Road tests
- ROAD TESTS, Commercial vehicles. See VEHICLES, Commercial, Road tests
- ROAD TESTS, Daf Daffodil de luxe extra cars. See MOTOR CARS, Types, Daf Daffodil de luxe extra, Road tests
- ROAD TESTS, Dennis Pax V commercial vehicles. See VEHICLES, Commercial, Types, Dennis Pax V, Road tests
- ROAD TESTS, Disc brakes, Motor cars. See MOTOR CARS, Brakes, Disc, Road tests
- ROAD TESTS, Ducati Daytona motor cycles. See MOTOR CYCLES, Types, Ducati Daytona, Road tests
- ROAD TESTS, Ducati Mach I motor cycles. See MOTOR CYCLES, Types, Ducati Mach I, Road tests
- ROAD TESTS, E.R.F. 64 CU 180-2T-York EP20SR articulated vehicles. See MOTOR VEHICLES, Articulated, Types, E.R.F. 64 CU 180-2T-York EP20SR, Road tests
- ROAD TESTS, E.R.F. 64GX3-Highway 1602R articulated vehicles. See MOTOR VEHICLES, Articulated, Types, E.R.F. 64GX3-Highway 1602R, Road tests
- ROAD TESTS, Estate cars. See ESTATE CARS, Road tests
- ROAD TESTS, Fiat 500D cars. See MOTOR CARS, Types, Fiat 500D, Road tests
- ROAD TESTS, Fiat 850 cars. See MOTOR CARS, Types, Fiat 850, Road tests
- ROAD TESTS, Fiat 1100D estate cars. See ESTATE CARS, Types, Fiat 1100D, Road tests
- ROAD TESTS, Fiat 1500, estate cars. See ESTATE CARS, Types, Fiat 1500, Road tests
- ROAD TESTS, Fiat 1500L cars. See MOTOR CARS, Types, Fiat 1500L, Road tests
- ROAD TESTS, Ford Consul Capri GT cars. See MOTOR CARS, Types, Ford Consul Capri GT, Road tests
- ROAD TESTS, Ford Consul Corsair cars. See MOTOR CARS, Types, Ford Consul Corsair, Road tests
- ROAD TESTS, Ford Consul Cortina Lotus cars. See MOTOR CARS, Types, Ford Consul Cortina Lotus, Road tests
- ROAD TESTS, Ford Consul Cortina Super 1500 cars. See MOTOR CARS, Types, Ford Consul Cortina Super 1500, Road tests
- ROAD TESTS, Ford Galaxie 500 Convertible cars. See MOTOR CARS, Types, Ford Galaxie 500 Convertible, Road tests
- ROAD TESTS, Ford Mustang Convertible cars. See CARS, Types, Ford Mustang Convertible, Road tests
- ROAD TESTS, Ford Mustang Coupé Hard-top cars. See MOTOR CARS, Types, Ford Mustang Coupé Hard-top, Road tests
- ROAD TESTS, Ford Thames 15 cwt vans. See VANS, Types, Ford Thames 15 cwt., Road tests
- ROAD TESTS, Ford Thames Trader Clearway vans. See VANS, Types, Ford Thames Trader Clearway, Road tests
- ROAD TESTS, Ford Zephyr 6 cars. See MOTOR CARS, Types, Ford Zephyr 6, Road tests
- ROAD TESTS, Ford Zephyr 6 estate cars. See ESTATE CARS, Types, Ford Zephyr 6, Road tests
- ROAD TESTS, Ford Zodiac 3 cars. See MOTOR CARS, Types, Ford Zodiac 3, Road tests
- ROAD TESTS, Francis Barnett Sports Fulmar motor cycles. See MOTOR CYCLES, Types, Francis Barnett Sports Fulmar, Road tests
- ROAD TESTS, Garelli Oulton Special motor cycles. See MOTOR CYCLES, Types, Garelli Oulton Special, Road tests
- ROAD TESTS, Gilbern G.T. motor cars. See MOTOR CARS, Types, Gilbern G.T., Road tests
- ROAD TESTS, Gilera 123 cc motor cycles. See MOTOR CYCLES, Types, Gilera 123 cc, Road tests
- ROAD TESTS, Gilera Jubilee motor cycles. See MOTOR CYCLES, Types, Gilera Jubilee, Road tests
- ROAD TESTS, Glas 1700 cars. See MOTOR CARS, Types, Glas 1700, Road tests
- ROAD TESTS, Guy Invincible 3-York EP17 articulated vehicles. See MOTOR VEHICLES, Articulated, Types, Guy Invincible 3-York EP17, Road tests
- ROAD TESTS, Hillman Husky Series 3 estate cars. See ESTATE CARS, Types, Hillman Husky Series 3, Road tests
- ROAD TESTS, Hillman Minx Series V cars. See MOTOR CARS, Types, Hillman Minx Series V, Road tests
- ROAD TESTS, Hillman Super Minx cars. See MOTOR CARS, Types, Hillman Super Minx, Road tests

- ROAD TESTS, Hillman Super Minx 2 Convertible cars. See MOTOR CARS, Types, Hillman Super Minx 2 Convertible, Road tests
- ROAD TESTS, Hillman Super Minx 3 cars. See MOTOR CARS, Types, Hillman Super Minx 3, Road tests
- ROAD TESTS, Honda C200 motor cycles. See MOTOR CYCLES, Types, Honda C200, Road tests
- ROAD TESTS, Honda CB 72 motor cycles. See MOTOR CYCLES, Types, Honda CB 72, Road tests
- ROAD TESTS, Honda CB 92 motor cycles. See MOTOR CYCLES, Types, Honda CB 92, Road tests
- ROAD TESTS, Honda CB 160 Sports motor cycles. See MOTOR CYCLES, Types, Honda CB 160 Sports, Road tests
- ROAD TESTS, Humber Hawk 3 cars. See MOTOR CARS, Types, Humber Hawk 3, Road tests
- ROAD TESTS, ISO Rivolta IR-340 cars. See MOTOR CARS, Types, ISO Rivolta IR-340, Road tests
- ROAD TESTS, Jaguar E-type 4.2 litres cars. See MOTOR CARS, Types, Jaguar E-type 4.2 litres, Road tests
- ROAD TESTS, Jaguar Mk.10 4.2 litre automatic motor cars. See MOTOR CARS, Types, Jaguar Mk.10 4.2 litres automatic, Road tests
- ROAD TESTS, Jaguar S-type cars. See MOTOR CARS, Types, Jaguar S-type, Road tests
- ROAD TESTS, Kaiser Jeep Wagoneer estate cars. See ESTATE CARS, Types, Kaiser Jeep Wagoneer, Road tests
- ROAD TESTS, Lambretta Cento scooters. See SCOOTERS, Types, Lambretta Cento, Road tests
- ROAD TESTS, Lancia Flavia Coupé cars. See MOTOR CARS, Types, Lancia Flavia Coupé, Road tests
- ROAD TESTS, Lancia Fulvia cars. See MOTOR CARS, Types, Lancia Fulvia, Road tests
- ROAD TESTS, Lancia Fulvia 2C cars. See MOTOR CARS, Types, Lancia Fulvia 2C, Road tests
- ROAD TESTS, Leyland Badger-Scammell Fourtrak articulated vehicles. See MOTOR VEHICLES, Articulated, Types, Leyland Badger-Scammell, Fourtrak, Road tests
- ROAD TESTS, Leyland Retriever commercial vehicles. See VEHICLES, Commercial, Types, Leyland Retriever, Road tests
- ROAD TESTS, Lotus Elan 1600 cars. See MOTOR CARS, Types, Lotus Elan 1600, Road tests
- ROAD TESTS, M.G. Midget Mark 2 cars. See MOTOR CARS, Types, M.G. Midget Mark 2, Road tests
- ROAD TESTS, Matchless G15 motor cycles. See MOTOR CYCLES, Types, Matchless G15, Road tests
- ROAD TESTS, Mercedes-Benz 230SL Automatic cars. See MOTOR CARS, Types, Mercedes-Benz 230SL Automatic, Road tests
- ROAD TESTS, Mercedes-Benz 230SL cars. See MOTOR CARS, Types, Mercedes-Benz 230SL, Road tests
- ROAD TESTS, Mercedes-Benz 300 SE 1.w.b. Automatic cars. See MOTOR CARS, Types, Mercedes-Benz 300 SE 1.w.b. Automatic, Road tests
- ROAD TESTS, Mercedes-Benz L1113 lorries. See LORRIES, Types, Mercedes-Benz L1113, Road tests
- ROAD TESTS, Mercedes-Benz LP 1620-Doll lorry-trailer combinations. See LORRY-TRAILER COMBINATIONS, Types, Mercedes-Benz LP 1620-Doll, Road tests
- ROAD TESTS, Mercedes-Benz LPS 1620/30-Schenk Sa 16 100 articulated vehicles. See MOTOR VEHICLES, Articulated, Types, Mercedes-Benz LPS 1620/30-Schenk 16 100, Road tests
- ROAD TESTS, Morris FGK100 lorries. See LORRIES, Types, Morris FGK100, Road tests
- ROAD TESTS, Morris Mini-Cooper S 1275 c.c. cars. See MOTOR CARS, Types, Morris Mini-Cooper S 1275 c.c., Road tests
- ROAD TESTS, Morris Minor 1000 de luxe cars. See MOTOR CARS, Types, Morris Minor 1000 de luxe, Road tests
- ROAD TESTS, Morris Oxford 6 Traveller estate cars. See ESTATE CARS, Types, Morris Oxford 6 Traveller, Road tests
- ROAD TESTS, Norton 'Electra 400' motor cycles. See MOTOR CYCLES, Types, Norton 'Electra 400', Road tests
- ROAD TESTS, Panhard 24CT Sports Coupé cars. See MOTOR CARS, Types, Panhard 24CT Sports Coupé, Road tests
- ROAD TESTS, Porsche 1600 SC cars. See MOTOR CARS, Types, Porsche 1600 SC, Road tests
- ROAD TESTS, Rambler 770 Six cars. See MOTOR CARS, Types, Rambler 770 Six, Road tests
- ROAD TESTS, Reliant 'Regal 3/25' three-wheeler cars. See MOTOR CARS, Three-wheelers, Types, Reliant 'Regal 3/25', Road tests
- ROAD TESTS, Reliant Sabre 6 G.T. cars. See MOTOR CARS, Types, Reliant Sabre 6 G.T., Road tests
- ROAD TESTS, Renault R8 cars. See MOTOR CARS, Types, Renault R8, Road tests
- ROAD TESTS, Renault R8 1100 cars. See MOTOR CARS, Types, Renault R8 1100, Road tests
- ROAD TESTS, Renault Floride Caravelle cars. See MOTOR CARS, Types, Renault Floride Caravelle, Road tests
- ROAD TESTS, Rochdale Olympic Phase 11 cars. See MOTOR CARS, Types, Rochdale Olympic Phase 11, Road tests
- ROAD TESTS, Rover 3 litre Coupé cars. See MOTOR CARS, Types, Rover 3 litre Coupé, Road tests
- ROAD TESTS, Rover 3-litre Saloon Automatic cars. See MOTOR CARS, Types, Rover 3-litre Saloon Automatic, Road tests
- ROAD TESTS, Royal Enfield "Interceptor de luxe" motor cycles. See MOTOR CYCLES, Types, Royal Enfield "Interceptor de luxe", Road tests
- ROAD TESTS, Scammell Scarab 4-Scammell MH articulated vehicles. See MOTOR VEHICLES, Articulated, Types, Scammell Scarab 4-Scammell MH, Road tests
- ROAD TESTS, Sidecars, Motor cycles. See MOTOR CYCLES, Sidecars, Road tests
- ROAD TESTS, Simca 1000 GLS cars. See MOTOR CARS, Types, Simca 1000 GLS, Road tests
- ROAD TESTS, Simca 1300 GL cars. See MOTOR CARS, Types, Simca 1300 GL, Road tests
- ROAD TESTS, Simca 1500 cars. See MOTOR CARS, Types, Simca 1500, Road tests
- ROAD TESTS, Singer Chamois cars. See MOTOR CARS, Types, Singer Chamois, Road tests
- ROAD TESTS, Singer Gazelle Series V cars. See MOTOR CARS, Types, Singer Gazelle Series V, Road tests
- ROAD TESTS, Singer Vogue Mk II cars. See MOTOR CARS, Types, Singer Vogue Mk II, Road tests
- ROAD TESTS, Standard-Triumph 2000 cars. See MOTOR CARS, Types, Standard-Triumph 2000, Road tests
- ROAD TESTS, Standard-Triumph Herald 1200 cars. See MOTOR CARS, Types, Standard-Triumph Herald 1200, Road tests
- ROAD TESTS, Standard-Triumph Herald 12/50 cars. See MOTOR CARS, Types, Standard-Triumph Herald 12/50, Road tests
- ROAD TESTS, Standard-Triumph Spitfire Stage 2 cars. See MOTOR CARS, Types, Standard-Triumph Spitfire Stage 2, Road tests
- ROAD TESTS, Studebaker Avanti cars. See MOTOR CARS, Types, Studebaker Avanti, Road tests
- ROAD TESTS, Sunbeam Alpine Series 4GT cars. See MOTOR CARS, Types, Sunbeam Alpine Series 4GT, Road tests
- ROAD TESTS, Sunbeam Rapier Series 4 cars. See MOTOR CARS, Types, Sunbeam Rapier Series 4, Road tests
- ROAD TESTS, Suzuki K11 motor cycles. See MOTOR CYCLES, Types, Suzuki K11, Road tests

ROAD TESTS, Triumph 5 TA Speed Twin motor cycles. See MOTOR CYCLES, Types, Triumph 5 TA Speed Twin, Road tests

ROAD TESTS, Triumph Bonneville 120 motor cycles. See MOTOR CYCLES, Types, Triumph Bonneville 120, Road tests

ROAD TESTS, Trojan Tourer cars. See MOTOR CARS, Types, Trojan Tourer, Road tests

ROAD TESTS, Vanden Plas Princess 4-litre motor cars. See MOTOR CARS, Types, Vanden Plas Princess 4-litre R, Road tests

ROAD TESTS, Vanden Plas Princess 1100 cars. See MOTOR CARS, Types, Vanden Plas Princess 1100, Road tests

ROAD TESTS, Vauxhall Cresta Estate cars. See ESTATE CARS, Types, Vauxhall Cresta Estate, Road tests

ROAD TESTS, Vauxhall VX4/90 cars. See MOTOR CARS, Types, Vauxhall VX4/90, Road tests

ROAD TESTS, Vauxhall Viva de luxe cars. See MOTOR CARS, Types, Vauxhall Viva de luxe, Road tests

ROAD TESTS, Vauxhall Victor de luxe estate cars. See ESTATE CARS, Types, Vauxhall Victor de luxe, Road tests

ROAD TESTS, Velocette Venom Special motor cycles. See MOTOR CYCLES, Types, Velocette Venom Special, Road tests

ROAD TESTS, Velocette Viper Special motor cycles. See MOTOR CYCLES, Types, Velocette Viper Special, Road tests

ROAD TESTS, Velocette Vague motor cycles. See MOTOR CYCLES, Types, Velocette Vague, Road tests

ROAD TESTS, Volkswagen 1500S cars. See MOTOR CARS, Types, Volkswagen 1500S, Road tests

ROAD TESTS, Volkswagen 1500 S Variant estate cars. See ESTATE CARS, Types, Volkswagen 1500 S Variant, Road tests

ROAD TESTS, Wartburg 1000 cars. See MOTOR CARS, Types, Wartburg 1000, Road tests

ROAD TESTS, Wolseley 6/110 cars. See MOTOR CARS, Types, Wolseley 6/110, Road tests

ROADHEADS, Coal mining. See COAL, Mining, Roadheads

## ROADS

Jams tomorrow? Times Rev. of Industry & Technology, 2 (May 64) p.16+. il.

## ROADS

Related Headings:

FLYOVERS  
FOOTWAYS  
KERBS  
MOTORWAYS  
STREETS  
TRAFFIC ENGINEERING  
UNDERPASSES

## ROADS—SUBHEADINGS—Synopsis—cont.

Western England  
Wimborne  
Somerset  
Devon

Midlands  
Worcestershire  
Coventry  
Shrewsbury  
Newark

Northern England  
Chester  
Harthill  
Cumberland

Wales  
South Wales  
Penally

Scotland  
Dumfriesshire

Northern Ireland  
Belfast

Europe  
Austria  
Innsbruck  
Switzerland

Africa  
Nigeria  
South Africa

North America  
U.S.A.

Australia  
Victoria

## Research

## Costs

## Problems

Frost damage  
Vegetation control  
Herbicides

## Technical activities

Planning  
Rating systems  
Design  
Surveying  
Conversion from...  
Landscaping  
Construction, Equipment  
Earth moving  
Maintenance  
Repairs  
Heating  
Cleansing  
Snow clearance  
Blasting

## Materials

Aggregates  
Stone  
Concrete  
Pulverised fuel ash  
Blast furnace slags

## Structural elements

Bases  
Subgrades  
Surfaces  
Embankments

## ROADS—SUBHEADINGS—Synopsis

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

### Particular localities

Great Britain  
South Eastern England  
Fulham  
Brentwood  
Witham  
High Wycombe  
Middlesex  
Staines  
Ightham  
Hampshire



**ROADS—SUBHEADINGS—Synopsis—cont.**

## Plan &amp; design elements

Service areas

Fences

Intersections

Roundabouts

Signs

White lines

## Types of roads

Stabilised soil

Elevated

Frost resistant

## Road use

Town &amp; country planning

Town planning

Transport

Haulage

Traffic

Safety

Accidents

Speed limits

**ROADS, Accidents**Assessing the guilt for road accidents. *Transport J.*, 22 (14 Feb 64) p.185-6. il.Human factor in road accidents. C. H. Bridgen. *Commercial Vehicles*, 38 (Mar 64) p.28-30Light on black spot. *Motor* (15 Jul 64) p.106-7. il.**ROADS, Accidents, Correlation with driver galvanic skin response**Drivers' galvanic skin response and the risk of accident. D. H. Taylor. *Ergonomics*, 7 (Oct 64) p.439-51. refs.**ROADS, Aggregates**Investigation of test procedures for argillaceous & gritty rocks in relation to breakdown under traffic. F. A. Shergold & J. R. Hosking. *Roads & Road Construction*, 41 (Dec 63) p.376-8. refs.**ROADS, Bases, Cement-stabilised**Present day experience of cement stabilised bases. L. S. Blake. *Civil Engng. & Public Works Rev.*, 59 (Apr 64) p.464-6. il.**ROADS, Bases, Cement-stabilised, Testing**Testing the distribution of Portland cement in treated road bases. M. Loran. *Cement, Lime & Gravel*, 39 (Oct 64) p.343-4. il.**ROADS, Belfast**Belfast builds another crossing over the Lagan. *Municipal Engng.*, 141 (28 Feb 64) p.343. il.**ROADS, Blast furnace slags**Blast furnace slag & pulverised fuel ash as road foundation materials. C. F. Trigg. *Roads & Road Construction*, 42 (Mar 64) p.75-81. il. refs.**ROADS, Blasting**Technical considerations for blasting on road works. R. B. D. Campbell. *Municipal Engng.*, 141 (22 May 64) p.946-8. il.Technical considerations for blasting on roadworks (contd.) R. B. D. Campbell. *Municipal Engng.*, 141 (29 May 64) p.987-9. il.**ROADS, Brentwood**£3½m. Essex trunk road scheme. *Surveyor*, 123 (28 Mar 64) p.15-17. il.**ROADS, Chester**Modern roads and historical remains. *Surveyor*, 124 (11 Jul 64) p.22-4. il.**ROADS, Cleansing, Vehicles**Applications of the small sweeper. *Municipal Engng.*, 141 (3 Apr 64) p.605+. il.Mechanical street cleansing. *Public Cleansing*, 54 (Jun 64) p.952-4

Modern vehicles and equipment in Germany (summary)

W. Kaupert & O. Tope. *Public Cleansing*, 54 (Jun 64) p.945-7**ROADS, Cleansing, Vehicles, Brushes, Polypropylene**Bristling with possibilities: Burnley puts polypropylene to the test. *Public Cleansing*, 54 (Mar 64) p.805-6**ROADS, Concrete**Current trends in major concrete road construction. K. M. Brook. *Civil Engng. & Public Works*, 59 (Feb 64) p.203+. il.Economics of road construction, pt.2: economics of concrete road and motorway construction. A. Shaw. *Structural Concrete*, 2 (Jan/Feb 64) p.13-35New concrete roads. *Concrete & Constructional Engng.*, 59 (Jul 64) p.237-9. refs.Role of concrete in the roads and bridges programme. *Municipal J.*, 72 (20 Mar 64) p.925-6. il.**ROADS, Concrete, Construction, Equipment**Mechanical plant for concrete pavement construction (summary) R. H. H. Kirkham. *Surveyor*, 123 (7 Mar 64) p.34+Road building faster by concrete train [Newark By-pass] *Engineering*, 198 (24 Jul 64) p.120. il.**ROADS, Concrete, Cutting, Saws, Diamond impregnated**Advantages of sawn joint in concrete paving. H. E. Nicolas. *Industrial Diamond Rev.*, 24 (Jul 64) p.160-3. il.Diamonds aid road safety. *Machinery Lloyd (European ed.)* 36 (Sep 64) p.43-6. il.Diamonds aid road safety. *Machinery Lloyd (Overseas ed.)* 36 (12 Sep 64) p.47-50. il.**ROADS, Concrete, Europe**Current mid-European concrete road construction. B. J. Walker & B. W. Johnson. *J. of Instn. of Highway Engrs.*, 11 (Nov 64) p.177-88. il.**ROADS, Concrete, Joints, Locked**More about locked joint concrete roads. *Surveyor*, 124 (3 Oct 64) p.49-50. il.**ROADS, Concrete, Research**Recent research into the construction of concrete pavements. R. H. H. Kirkham. *Instn. of Civil Engrs. Proc.*, 27 (Feb 64) p.241-62. il. refs.**ROADS, Concrete, Surfaces**New concrete surface to beat frost damage. *Contract J.*, 199 (7 May 64) p.47. il.**ROADS, Concrete, Thickness, Measurement, Transducers**Determining the thickness of concrete pavements by mechanical waves: diverging-beam method. G. Bradfield & E. P. H. Woodroffe. *Magazine of Concrete Research*, 16 (Mar 64) p.45-8. il. refs.**ROADS, Concrete, Thickness, Measurement, Transducers, Steerable-beam**Determining the thickness of concrete pavements by mechanical waves: directed-beam method. G. Bradfield & E. N. Gatfield. *Magazine of Concrete Research*, 16 (May 64) p.49-53. il. refs.**ROADS, Construction, Equipment**Highway engineering and the mechanical engineer. F. J. Metcalfe & H. Stringer. *J. of Instn. of Highway Engrs.*, 11 (Jul 64) p.129-33Mechanisation of roadbuilding. *Machinery Lloyd (European ed.)* 36 (Sep 64) p.49-54. il.Mechanisation of roadbuilding. *Machinery Lloyd (Overseas ed.)* 36 (12 Sep 64) p.53-8. il.Roadbuilding in Europe: techniques studied by British engineers. *Contract J.*, 201 (29 Oct 64) p.1130-2. il.Roadbuilding in Europe, pt.2: techniques studies by British engineers. *Contract J.*, 202 (5 Nov 64) p.43+. il.

**ROADS, Construction, Equipment**

Related Headings:

**ROAD ROLLERS****ROADS, Construction, Equipment, Noise, Reduction**

Towards quieter roadmaking. Machinery Lloyd (European ed.) 36 (Sep 64) p.34-6. il.

Towards quieter roadmaking. Machinery Lloyd (Overseas ed.) 36 (12 Sep 64) p.38-40. il.

**ROADS, Construction, Equipment, U.S.A.**

American road building plant. Engineer, 218 (18 Dec '64) p.1026-7. il.

**ROADS, Conversion from permanent way**

Skirmish on railway conversion: the Cobham-Guildford line. T. I. Lloyd. Engineer, 217 (7 Feb 64) p.260-2. il.

**ROADS, Costs**

Measurement &amp; allocation of road costs. Roads &amp; Road Construction, 42 (Sep 64) p.287-93

Measurement and allocation of road costs. Surveyor, 124 (29 Aug 64) p.15-20

Motor car—who pays? F. W. Dawkes. Surveyor, 123 (13 Jun 64) p.22-3

**ROADS, Coventry**

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PETROLEUM, Refineries, Rotterdam

PORTS, Rotterdam

RAILWAYS, Underground, Rotterdam

ROUGHNESS, Machined surfaces. See SURFACES, Machined, Roughness

ROUGHNESS, Surfaces, Castings. See CASTINGS, Surface roughness

ROUGHNESS, Surfaces, Effect on annular pipe flow, Water. See WATER, Flow, Pipes, Annular, Effect of surface roughness

ROUGHNESS, Surfaces, Walls, Heat transfer, Annular pipes, Gas flow. See GAS FLOW, Pipes, Annular, Heat transfer, Effect of wall surface roughness

**ROUMANIA**

See

RUMANIA

ROUND BUILDINGS. See BUILDINGS, Round

**ROUNDBABOUTS (Roads) Research**

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ROVER 2000 CARS. See MOTOR CARS, Types, Rover 2000

ROVER B.R.M. MOTOR CARS. See MOTOR CARS, Types, Rover B.R.M.

ROVER P4 MOTOR CARS. See MOTOR CARS, Types, Rover P4

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**ROYAL AIRCRAFT ESTABLISHMENT, Bedford**

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**ROYAL ENFIELD "INTERCEPTOR DE LUXE" MOTOR CYCLES.** See MOTOR CYCLES, Types, Royal Enfield "Interceptor de luxe"**ROYAL ENFIELD MOTOR CYCLES.** See MOTOR CYCLES, Types, Royal Enfield**ROYAL FLEET AUXILIARY SERVICE**

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**RUBBER**

Related Headings:

LATEX

SILICONES, Rubber

**RUBBER—SUBHEADINGS—Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

History

Technical literature

Education

Research

Problems

Cracks

Physical & chemical aspects

Ageing

Mechanical properties

Plasticity

Compressibility

Technical activities

Analysis

Determination of

Manufactures

Vulcanisation

Mixing

Moulding

Extrusion

Extruders

Reclamation

**RUBBER—SUBHEADINGS—Synopsis—cont.**

Materials

Fillers

Antiozonants

Stabilisers

Products

Components

Kinds of rubber

Crude

Solutions

Expanded

Reinforced

Phenolic resin reinforced

Synthetic

Alfin

Applications

Building materials

Engineering

Packaging materials

Propellants

RUBBER, Adhesives. See ADHESIVES, Rubber

**RUBBER, Ageing, Tests**

Ageing, pt.1. Rubber & Plastics Weekly, 145 (21 Dec 63) p.844+

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**RUBBER, Alfin**

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RUBBER, Bearings, Bridges. See BRIDGES, Bearings, Rubber

RUBBER, Bearings, Elevated motorways. See MOTORWAYS, Elevated, Bearings, Rubber

RUBBER, Body models, Medical radiology. See MEDICAL RADIOLOGY, Body models, Rubber

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**RUBBER, Compressibility, Low pressure**

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RUBBER, Coverings, Floors. See FLOORS, Coverings, Rubber

RUBBER, Covering, Travelling footways. See FOOTWAYS, Travelling, Covering, Rubber

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**RUBBER, Diaphragm punch power presses. See PRESSES, Power (Diaphragm punch)****RUBBER, Education, Laboratories**

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Recollections and anticipations (extracts) L. R. Ridgway. *Rubber J.*, 146 (Jul 64) p.81-2

Rubber in 1970. P. W. Allen. *Rubber J.*, 146 (Aug 64) p.28+. il.

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Hutchings. *Rubber J.*, 146 (Aug 64) p.80-3. il.

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**RUBBER, Rollers, Printing machines.** See **PRINTING, Machines, Rollers, Rubber**

**RUBBER, Roofing.** See **ROOFING, Rubber**

**RUBBER, Seals.** See **SEALS, Rubber**

**RUBBER, Sheathing, Electric cables.** See **CABLES, Electric, Sheathing, Rubber**

**RUBBER, Sheets.** See **SHEETS, Rubber**

**RUBBER, Silicones, Gaskets, Vacuum equipment.** See **VACUUM, Equipment, Gaskets, Silicones, Rubber**

**RUBBER, Silicones, Moulds, Reinforced plastics moulding.** See **PLASTICS, Reinforced, Moulding, Moulds, Silicones, Rubber**

**RUBBER, Soles, Football boots.** See **BOOTS, Football, Soles, Rubber**

**RUBBER, Soles, Footwear.** See **FOOTWEAR, Soles, Rubber**

**RUBBER, Soles, Shoes.** See **SHOES, Soles, Rubber**

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**RUBBER, Springs, Motor cars.** See **MOTOR CARS, Springs, Rubber**

**RUBBER, Springs, Shock absorbers.** See **SHOCK ABSORBERS, Springs, Rubber**

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BUTADIENE, Rubber

BUTADIENE MONOXIDE

BUTYL RUBBER

ETHYLENE-PROPYLENE, Rubber

FLUOROCARBONS, Rubber

NEOPRENE

NITRILE RUBBER

POLYBUTADIENE

POLYISOPRENE

POLYSULPHIDE RUBBER

STYRENE-BUTADIENE RUBBER

**RUBBER, Synthetic, Aprons, Drafting, Drawing, Worsted yarns.** See **YARNS, Worsted, Drawing, Drafting, Aprons, Rubber, Synthetic**

**RUBBER, Synthetic, Aprons, Drafting, Spinning, Yarns.** See **YARNS, Spinning, Drafting, Aprons, Rubber, Synthetic**

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RUBBER, Waterstops, Walls, Reservoirs. See RESERVOIRS, Walls, Waterstops, Rubber

RUBBER COVERED ROLLERS, Printing machines. See PRINTING, Machines, Rollers, Rubber covered

RUBBER-STEEL, Laminates, Fenders, Docks. See DOCKS, Fenders, Laminates, Rubber-Steel

RUBBERISED BINDERS, Dressings, Road surfaces. See ROADS, Surfaces, Dressing, Rubberised binders

RUBBERISED BITUMEN, Dressing, Roadways, Suspension bridges. See BRIDGES, Suspension, Roadways, Dressing, Bitumen, Rubberised

RUBBERISED BITUMEN, Surface dressing, Roads. See ROADS, Surfaces, Dressing, Bitumen, Rubberised

RUBBERISED SEALANTS. See SEALANTS, Rubberised

RUBIDIUM, Gas cells, Frequency standards. See FREQUENCY, Standards, Gas cells, Rubidium

RUBIDIUM, Vapour, Magnetometers, Geomagnetic field. See GEOMAGNETIC FIELD, Magnetometers, Rubidium vapour

RUBIES, Lasers. See LASERS, Rubies

RUGELEY

See

POWER STATIONS, Rugeley

RUHR

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COAL, Mining, Ruhr

RUINS, Religious buildings. See RELIGIOUS BUILDINGS, Ruins

RULING, Paper. See PAPER, Ruling

RUMANIA

See

CHEMICAL TECHNOLOGY, Rumania

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RUNCORN

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TOWN PLANNING, Runcorn

RUNNER BEANS, Determination of gibberellins, Chromatography, Thin-layer

Examination of the gibberellins of Zea mays and Phaseolus multiflorus using thin-layer chromatography. D. F. Jones.

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RUNNERS, Steel, Stainless, Water turbines. See WATER, Turbines, Runners, Steel, Stainless

RUNWAYS (Aerodromes) Safety, Barriers, Cables, Drums, Bearings, Roller

Arrester barriers for aircraft. Ball Bearing J. (Oct 64) p.5-10. il.

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RUNWAYS, Toboggans. See TOBOGGANS, Runways.

RUNWAYS, Trolleys. See TROLLEYS, Runways

RUPTURE, Stress, Thermoplastic pipes. See PIPES, Thermoplastics, Stress rupture

RUPTURE, Tensile, Paper. See PAPER, Rupture, Tensile

RURAL BUSES. See BUSES, Rural

RURAL ELECTRIC POWER SYSTEMS. See ELECTRIC POWER SYSTEMS, Rural

## RURAL INDUSTRIES BUREAU

Advisory and technical services of the Rural Industries

Bureau. Machinery, 105 (26 Aug 64) p.548-9. il.

RURAL MOTOR COACHES. See MOTOR COACHES, Rural

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RUSA OIL. See PALMAROSA OIL

RUSSIA

See

ARCHITECTURE, Ani

ARCHITECTURE, Russia

BOATS, Motor, Hydrofoil, Russia

BUILDING, Computers, Russia

BUTTER, Manufacture, Russia

CHEESE, Hard, Manufactures, Russia

CHEESE, Manufactures, Russia

CHEMICAL ENGINEERING, Control systems, Russia

CHEMICAL TECHNOLOGY, Russia

COAL, Mining, Machines, Russia

COAL, Mining, Russia

DYEING, Education, Russia

ELECTRIC POWER SYSTEMS, Russia

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- SANDWICH REINFORCED PLASTICS PANELS**. See PANELS, Plastics, Reinforced, Sandwich
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**SAPPHIRE, Rods. See RODS, Sapphire****SAPPHIRES, Artificial, Grinding, Diamond**

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*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

**Orbits****Technical activities**

*Detection*

*Observation*

*Control*

*Orbit-Station variables*

*Signals*

*Attitude control*

*Data processing*

*Re-entry into atmosphere*

**Parts & equipment**

*Electronic components*

*Instruments*

*Guidance systems*

*Sustainers*

**Types**

*Balloon*

*By function*

*Communication*

*Observatories*

*(Navigation)*

*Meteorology*

*Geodesy*

*Military*

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**DIAMOND SAWING**

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**SAWS, Diamond impregnated, Cutting, Building stone.** See **BUILDING, Stone, Cutting, Saws, Diamond impregnated**

**SAWS, Diamond impregnated, Cutting, Concrete, Motorways.** See **MOTORWAYS, Concrete, Cutting, Saws, Diamond impregnated**

**SAWS, Diamond impregnated, Cutting, Concrete roads.** See **ROADS, Concrete, Cutting, Saws, Diamond impregnated**

**SAWS, Wood.** See **WOOD, Saws**

**SAWTOOTH WAVEFORMS, Generators.** See **SWEEP GENERATORS, Miller**

**SCAB, High pressure mould castings, Iron.** See **IRON, Castings (High pressure mould) Scab**

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**SCALE, Calcium sulphate hemihydrate, Evaporators, Sea water.** See **SEA, Water, Evaporators, Scale, Calcium sulphate hemihydrate**

**SCALE, Soaking pits, Steel, Ingots.** See **INGOTS, Steel, Soaking pits, Scale**

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SCAN MAGNIFICATION, Tubes, Transistor time bases, Receivers, Television. See TELEVISION, Receivers, Time bases, Transistor, Tubes, Scan magnification

**SCANDINAVIA**

See

CONCRETING, Winter, Scandinavia

PLASTICS, Industry, Scandinavia

SCANNERS, Feature cards. See FEATURE CARDS, Scanners

SCANNERS, Flying spot, Cathode testing, Photomultipliers. See PHOTOMULTIPLIERS, Cathodes, Testing, Flying spot scanners

SCANNERS, Line measurements, Powder photographs, X-ray diffraction. See X-RAYS, Diffraction, Powder photographs, Lines, Measurements, Scanners

SCANNERS, Oscilloscopes, Displays, *h* parameters, Transistor balanced preamplifiers. See PREAMPLIFIERS, Balanced, Transistor, *h* parameters, Displays, Oscilloscopes, Scanners

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SCANNING, Line, Receivers, Television. See TELEVISION, Receivers, Line scanning

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SCANNING, Microscopy, Metallography. See METALLOGRAPHY, Microscopy, Scanning

SCANNING, Microscopy, Non-metallic inclusions, Steel. See STEEL, Inclusions, Non-metallic, Microscopy, Scanning

SCANNING, Photoelectric, Colour separations, Half-tone illustrations. See ILLUSTRATIONS, Half-tone, Colour separations, Scanning, Photoelectric

SCANNING, Photoelectric, Engraving, Half-tone illustrations. See ILLUSTRATIONS, Half-tone, Engraving, Photoelectric scanning

SCANNING, Photoelectric, Film levelling, Paint. See PAINT, Film levelling, Scanning, Photoelectric

SCANNING, Photoelectric, Interferometers, Optical flatness testing. See OPTICAL FLATNESS, Testing, Interferometers, Scanning, Photoelectric

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SCATTER, Dislocations. See DISLOCATIONS, Scattering properties

SCATTER, Elastic, Multiple, Electrons, Vacuum deposited metal films. See FILMS, Metals, Vacuum deposited, Electron scattering, Elastic, Multiple

SCATTER, Electromagnetic waves. See ELECTROMAGNETIC WAVES, Scattering

SCATTER, Electrons. See ELECTRONS, Scattering

SCATTER, Laser coherent light. See LIGHT, Coherent (Lasers) Scatter

SCATTER, Light, Compression, Paper. See PAPER, Compression, Cyclic loading Light scattering

SCATTER, Light, Effect on exposure, Uppermost elementary layer, Emulsions, Photography. See PHOTOGRAPHY, Emulsions, Uppermost elementary layer, Exposure, Effect of light scattering

SCATTER, Light, Soot studies, Benzene-Air flames. See FLAMES, Benzene-Air, Soot, Studies, Light scattering

SCATTER, Light, Viscosity-Molecular weight relationship determination, Solutions (Hexane), Polyoxypolyene. See POLYOXYPROPYLENE, Solutions (Hexane), Viscosity-Molecular weight relationship determination, scattering

SCATTER, Neutrons, Liquids. See LIQUIDS, Neutron scatter

SCATTER, Neutrons, Neutron irradiated graphite. See GRAPHITE, Irradiated (Neutrons) Neutron scattering

SCATTER, Phonons. See PHONON SCATTER

SCAVENGING, Diesel engines. See DIESEL ENGINES, Scavenging

SCENERY, Stages, Theatres. See THEATRES, Stages, Scenery

**SCHAFFHAUSEN**

See

TRAMWAYS, Schaffhausen

SCHALERBAU SYSTEM, Prefabricated houses. See HOUSES, Prefabricated, Schdlerbau system

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CENTRIFUGES

CENTRIFUGING

DIALYSIS

FILTRATION

FOAM SEPARATION

GEL FILTRATION

PERVAPORATION

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Related Headings:

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**SHAFTS, Couplings**

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**SHAFTS (Electric motors) Grinding**

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**SHAFTS, Mining, Subsidence, Bungalows.** See **BUNGALOWS, Subsidence, Mining, Shafts**

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**SHAFTS, Shouldered, Stress concentration, Torsion, Resistance network analogues**

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**SHAFTS, Steam turbines.** See **STEAM, Turbines, Shafts**

**SHAFTS, Steel, Printing machines.** See **PRINTING, Machines, Shafts, Steel**

**SHAFTS, Stepped, Steel, Extrusion, Cold**

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**SHAFTS, Water intakes, Cooling systems, Power stations.** See **POWER STATIONS, Cooling systems, Water intakes, Shafts**

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**SHALE, Coal cleaning.** See **COAL, Cleaning, Shale**

**SHALE, Hardcores, Concrete floors.** See **FLOORS, Concrete, Hardcores, Shale**

**SHAMPOOS, Carpets.** See **CARPETS, Shampoos**

**SHAPE RECOGNITION MACHINES**

Related Headings:

READING MACHINES

**SHAPE RECOGNITION MACHINES, Fibre optics**

Sceptron. R. Waller. *J. of Scientific Instruments*, 41 (May 64) p.261-2. il.

Self-programming pattern recognizer [Sperry Gyroscope Co. Sceptron] R. Waller. *Measurement & Control*, 3 (Mar 64) p.89. il. refs.

**SHAVING, Pressworking**

Equipment and techniques for the shaving and fine-blanking processes. A. Guidi. *Sheet Metal Industries*, 41 (Jan 64) p.8+. il.

**SHAW MOULDS.** See **MOULDS, Shell**

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**SHEAR CONNECTORS, Composite structures.** See **STRUCTURES, Composite, Connectors, Shear**

**SHEAR FLOW, Diffusers.** See **DIFFUSERS, Flow, Shear**

**SHEAR FLOW, Heat, Transient, Conduction**

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**SHEAR LAYER, Turbulent, Base pressure determination, Supersonic flow, Blunt bodies.** See **BLUNT BODIES, Flow, Supersonic, Base pressure, Determination, Turbulent shear layer**

**SHEAR LOADING, Buckling, Stiffened plates.** See **PLATES, Stiffened, Buckling, Shear**

**SHEAR LOADING, Castellated composite Tee beams.** See **BEAMS, Tee, Composite, Castellated, Shear loading**

**SHEAR LOADING, Post-tensioned concrete beams.** See **BEAMS, Concrete, Post-tensioned, Shear loading**

**SHEAR LOADING, Reinforced concrete beams.** See **BEAMS, Concrete, Reinforced, Shear loading**

**SHEAR RESISTANCE, Saturated clay soil.** See **SOIL, Clay, Saturated, Shear resistant**

**SHEAR STRENGTH, Consolidated clay soil.** See **SOIL, Clay, Consolidated, Shear strength**

**SHEAR STRENGTH, Granular soil.** See **SOIL, Granular, Shear strength**

**SHEAR STRENGTH, Sand.** See **SAND, Shear strength**

**SHEAR STRENGTH, Sand, Soil.** See **SOIL, Sand, Shear strength**

**SHEAR STRENGTH, Walls, Tall buildings.** See **BUILDINGS, Tall, Walls, Shear strength**

**SHEAR STRESSES, Close packing, Spheres.** See **SPHERES, Close packing, Shear stresses**

**SHEAR STRESSES, Elliptical sections.** See **SECTIONS, Elliptical, Shear stresses**

**SHEAR STRESSES, Steel twisted square bar reinforced concrete, Beams.** See **BEAMS, Concrete, Reinforced (Reinforcement, Bars, Square, Twisted, Steel) Shear stresses**

**SHEAR TESTS, Adhesion, Paint.** See **PAINT, Adhesion, Shear tests**



**SHEAR TESTS**, Soil mechanics. See **SOIL MECHANICS**, Testing, Shear

**SHEARERS**, Coal mining. See **COAL**, Mining, Shearers

**SHEARING**, Billets. See **BILLETS**, Shearing

**SHEARING**, Metals, Bars. See **BARS**, Metal, Shearing

**SHEARING**, Steel, Bars. See **BARS**, Steel, Shearing

**SHEARING**, Steel, Billets. See **BILLETS**, Steel, Shearing

**SHEARING**, Steel, Rods. See **RODS**, Steel, Shearing

**SHEARING**, Waveguides. See **WAVEGUIDES**, Manufactures, Shearing

**SHEARS**, Flying, Shearing, Steel, Bars. See **BARS**, Steel, Shearing (Shears, Flying)

**SHEARS**, Flying, Shearing, Steel, Billets. See **BILLETS**, Steel, Shearing, Shears, Flying

**SHEARS**, Flying, Shearing, Steel, Rods. See **RODS**, Steel, Shearing (Shears, Flying)

**SHEARS**, Garden, Industrial design  
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**SHEATHING**, Electric cables. See **CABLES**, Electric, Sheathing

**SHEATHS**, Plasmas, Effect on re-entry, Aerials, Vehicles, Astronautics. See **ASTRONAUTICS**, Vehicles, Aerials, Effect of re-entry, Plasma sheaths

**SHEATHS**, Plasmas, Effect on re-entry, Slotted cylinder aerials, Vehicles, Astronautics. See **ASTRONAUTICS**, Vehicles, Aerials, Slotted cylinder, Effect of re-entry, Plasma sheaths

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**SHEDS**, Portal frames, Pitched roofs, Clad, Structural analysis  
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**SHEDS**, Storage, Potatoes. See **POTATOES**, Storage, Sheds

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PORTS, Sheerness

**SHEET FED MACHINES**, Colour photogravure. See **PHOTO-GRAYURE**, Colour, Machines, Sheet-fed

**SHEET FED MACHINES**, Photogravure. See **PHOTO-GRAYURE**, Machines, Sheet-fed

**SHEET FED MACHINES**, Printing, Photogravure, Packaging materials. See **PACKAGING**, Materials, Printing, Photogravure, Machines, Sheet fed

**SHEET FED OFFSET LITHOGRAPHY**. See **LITHOGRAPHY**, Sheet fed offset

**SHEET FED ROTARY MACHINES**, Printing. See **PRINTING**, Machines, Sheet fed rotary

**SHEETS-SUBHEADINGS-Synopsis**

Properties  
Weight

Technical activities  
Coating

**SHEETS-SUBHEADINGS-Synopsis-cont.**

Materials  
Metals  
Magnetic  
Steel  
Non-ferrous metals  
Nimonic alloys  
Tungsten  
Titanium  
Titanium alloys  
Copper alloys  
Aluminium  
Aluminium alloys  
Magnesium alloys  
Plastics  
Acrylic plastics  
Thermoplastics  
Polystyrene  
P.V.C.  
Asbestos - P.V.C.  
Rubber  
Glass

Applications  
Buildings

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**SHEETS**, Aluminium, Tapered, Creep, Testing, Curves  
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**SHEETS, Bed. See BED SHEETS****SHEETS (Buildings) Butyl rubber**

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**SHEETS, Butyl rubber, Linings, Reservoirs. See RESERVOIRS, Linings, Sheets, Butyl rubber****SHEETS, Coating, Emulsion paint**

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**SHEETS, Metals, Brazing**

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**SHEETS, Metals, Cabinets, Refrigerators. See REFRIGERATORS, Cabinets, Sheets, Metals****SHEETS, Metals, Circular, Forming, Explosives, Die-less**

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**SHEETS, Metals, Impedance, Inductors, Lead sheathing**

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**SHEETS, Metals, Rolling, Cold, Mills, Perturbations, Equations, Coefficients, Determination, Neighbouring point method**

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**SHEETS, Metals, Welding, Arc, Gas shielded**

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**SHEETS, Polystyrene, Expanded, Extruders**

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**SHEETS, Rubber, Calendering, Liners, Rewinding, Machines**

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SHEETS, Steel, Prefabricated buildings. See BUILDINGS, Prefabricated, Sheets, Steel

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**SHEETS, Weight, Nomograms**

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**SHEFFIELD**

See

CHURCHES, Sheffield

EDGE TOOLS, Manufactures, Sheffield

HOUSING, Sheffield

**SHELL MOULDS. See MOULDS, Shell**

SHELL MOULDS, Casting, Crankshafts. See CRANK-SHAFTS, Casting, Moulds, Shell

SHELL MOULDS, Casting, Inserts, Dies, Drop forging. See FORGING, Drop, Dies, Inserts, Casting, Moulds, Shell

SHELL MOULDS, Casting, Steel. See STEEL, Casting, Moulds, Shell

**SHELL ROOFS. See ROOFS, Shell**

SHELL ROOFS, Factories. See FACTORIES, Roofs, Shell

SHELL ROOFS, Opera houses. See OPERA HOUSES, Roofs, Shell

SHELLAC, Graft polymerised, Coatings. See COATINGS, Shellac, Graft polymerised

**SHELLFISH**

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LOBSTERS

PRAWNS

**SHELLS, Boundary conditions**

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**SHELLS, Copper, Drawn, Punching**

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**SHELLS, Cylindrical, Axisymmetrically loaded, Analysis, Computers**

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**SHELLS, Metal, Drawing**

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**SHELLS, Spherical, Collapse**

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**SHEPPERTON**

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HOUSING, Old people, Shepperton

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SHIELDING, Burst fragments, Rotors, Gas turbines, Aircraft. See AIRCRAFT, Gas turbines, Rotors, Burst fragments, Shielding

SHIELDING, Flux leakage, Electrical equipment. See ELECTRICAL EQUIPMENT, Flux leakage, Shielding

SHIELDING, Lead, Nuclear reactors. See NUCLEAR REACTORS, Shielding, Lead

SHIELDING, Nuclear reactors. See NUCLEAR REACTORS, Shielding

SHIELDING, Radiography, Gamma radiation. See GAMMA RADIATION, Radiography, Shielding

SHIELDS, Boring, Tunnels, Underground railways. See RAILWAYS, Underground, Tunnels, Boring, Shields

**SHIFT REGISTERS, Feedback**

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**SHIPBUILDING**

Related Headings:

ALUMINIUM, Alloys, Shipbuilding materials

MARINE ENGINEERING

SHIPYARDS

WOOD, Chipboard, Shipbuilding materials

**SHIPBUILDING, Beverley**

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**SHIPBUILDING, Canada**

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**SHIPPING**

- Related Headings:
- BUOYS
  - FOG SIGNALS, Marine
  - LIGHT VESSELS
  - LIGHTHOUSES
  - PORTS
  - SHIPS

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**SHIPPING, Industry, Australia**

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**SHIPPING, Lanes, North Sea**

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**SHIPPING, Traffic control, Ports, Radar**

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- Thames radar coverage doubled. *Shipping World*, 150 (26 Mar 64) p.651-2. il.
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**SHIPS**

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**SHIPS**

- Related Headings:
- AMBULANCES, Sea
  - ANCHORS
  - BARGES



## SHIPS

## Related Headings—cont.

BOATS  
 DIVING, Equipment, Vessels  
 DREDGERS (Ships)  
 FERRIES  
 FIREBOATS  
 FISHING, Vessels  
 HULLS  
 ICEBREAKERS  
 LAUNCHES  
 LIFEBOATS  
 LIGHT VESSELS  
 SCHOONERS  
 SEAMANSHIP  
 TANKERS, Ships  
 TENDERS, Ships  
 TROOPSHIPS  
 TUGS  
 WARSHIPS  
 YACHTS

## SHIPS—SUBHEADINGS—Synopsis

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

## Costs

Research  
 Model tests

## Problems

Noise  
 Fires  
 Rats  
 Collisions  
 Corrosion  
 Cathodic protection

## Properties

Motion  
 Waves  
 Seaworthiness

## Technical activities

Design  
 Repairs  
 Conversion  
 Lengthening  
 Painting  
 Paint  
 Navigation  
 Data logging  
 Docking  
 Berthing  
 Loading  
 Bunkering

## Parts, Equipment &amp; Services

Equipment  
 Structural parts  
 Grillages  
 Plates  
 Beams  
 Panels  
 Bulkheads  
 Hatch covers  
 Bridges  
 Holds  
 Engine rooms  
 Masts  
 Galleys

## SHIPS—SUBHEADINGS—Synopsis—cont.

## Control systems

## Machinery

Engines  
 Steam engines  
 Steam turbines  
 Diesel engines  
 Petrol engines  
 Nuclear propulsion

## Water jet propulsion

## Valves

## Propellers

## Roll Stabilisers

## Boilers

## Superheaters

## Mechanical handling

## Cranes

## Winches

## Pipes

## Filters

## Electrical equipment

## Alternators

## Electrical installations

## Electronic equipment

## Services &amp; Facilities

## Engineering services

## Air conditioning

## Ventilation

## Interior design

## Passenger accommodation

## Catering

## Rescue appliances

## Performance

## Operational performance

## Stopping

## Types of ships

## By structure

## Ramp ended

## Straight framed

## By propulsion characteristics

## Motor

## By facilities

## Refrigerated

## By cargo

## Passenger

## Fruit carrying

## Banana

## Coal carrying

## Ore carrying

## Motor car carrying

## Train carrying

## By special function

## Training

## (Research)

## Fishery research

## Weather

## Cable repair

## Lighthouse supply

## Landing craft

## SHIPS, Air conditioning

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## SHIPS, Air conditioning, Equipment

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**SHIPS, Alternators**

New ASEA marine alternators (abstract) *Marine Engr. & Naval Architect*, 87 (Apr 64) p.190+. il.

**SHIPS, Alternators, Diesel engines**

Rolls-Royce generating sets. *Marine Engr. & Naval Architect*, 87 (Jan 64) p.8-9. il.

**SHIPS, Alternators, Diesel engines, Control systems**

Automatic control of auxiliary diesel alternators. *Shipbuilder*, 71 (Mar 64) p.125. il.

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Control system for diesel alternators. *Shipping World*, 150 (9 Apr 64) p.732. il.

**SHIPS (Banana)**

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**SHIPS (Banana) Diesel**

"Geestbay" a large & fast banana carrier. *Shipbuilding & Shipping Record*, 104 (27 Aug 64) p.276-9. il.

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*Shipping World & Shipbuilder*, 152 (1 Oct 64) p.79-82. il.  
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**SHIPS, Beams, Tee, Manufactures, Welding**

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**SHIPS, Berthing**

Berthing ship. *Dock & Harbour Authority*, 45 (Jul 64) p.69

**SHIPS, Berthing, Impacts**

Berthing ship: the effect of impact on the design of fenders and other structures. F. V. Costa. *Dock & Harbour Authority*, 45 (May 64) p.22-6. il.

Berthing ship: effect of impact on the design of fenders and other structures (contd.). F. V. Costa. *Dock & Harbour Authority*, 45 (Jun 64) p.49-53. il. refs.

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**SHIPS, Berthing, Television, Closed circuit**

Television aids mooring on Italian cargo ship. *Shipping World*, 150 (9 Apr 64) p.729-30. il.

**SHIPS, Boilers**

Two new Babcock boilers: high-performance designs with accent on simplified construction and ease of maintenance. *Marine Engr. & Naval Architect*, 87 (Sep 64) p.405-6. il.

**SHIPS, Boilers, Control systems**

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**SHIPS, Boilers, Feedwater, Heat balance, Calculations, Computers**

Computer programme for heat balance calculations: versatile methods used by Wallsend Slipway. M. F. Craig. *Marine Engr. & Naval Architect*, 87 (Nov 64) p.532-3. il.

**SHIPS, Boilers, Oil-fired**

Completely water-cooled marine boiler [V2M-8]: refractory problems eliminated. *Shipbuilding & Shipping Record*, 103 (26 Mar 64) p.412-13. il.

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"Amstelhof": versatile bulk carrier for Dutch ownership. Shipbuilder, 71 (Apr 64) p.148-50. il.

Largest Verolme bulk carrier. Shipping World, 150 (12 Mar 64) p.577-8. il.

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"Andorra", a 12,728-ton d.w. cargo liner with machinery controls arranged for crewless engine room at night. Shipbuilding & Shipping Record, 103 (4 Jun 64) p.752-4. il.

Cargo liner "Andorra". Shipping World & Shipbuilder, 151 (2 Jul 64) p.102-5. il.

East Asiatic Company's "Andorra". Marine Engr. & Naval Architect, 87 (Jun 64) p.253-9. il.

No watchkeeping engineers required on new cargo liner [East Asiatic Co.'s refrigerated 18.4 knot "Andorra"] Motor Ship, 45 (Jun 64) p.98-104. il.

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Ben Line's largest ship [Bendeareg] Shipping World & Shipbuilder, 151 (23 Jul 64) p.273-4. il.

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New class of refrigerated vessels. Shipping World, 150 (28 May 64) p.1075. il.

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Clelands series of Excelship standard 2600 tonners. Motor Ship, 45 (Sep 64) p.250-3. il.

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"Cambridge Ferry": new ship for the Harwich-Zeebrugge train ferry service. Shipbuilder, 71 (Feb 64) p.92-6. il.

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New sea-going self-unloader [Cape Breton Miner] Shipping World, 150 (14 May 64) p.989-93. il.

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Largest and last from Short's: 20,500 tdw universal bulk ship "Carlton" is the 540th ship to be built by Short Bros., Ltd. Marine Engr. & Naval Architect, 87 (Mar 64) p.122-3. il.

Short's build first British universal bulk ship. Shipping World, 150 (13 Feb 64) p.396-7. il.

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"Concordia": a self-trimming motorship. Shipping World & Shipbuilder, 151 (2 Jul 64) p.107-10. il.

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"Dana Scarlett", a passenger & car ferry for the Sound. Shipbuilding & Shipping Record, 103 (5 Mar 64) p.316-17. il.

"Dana Scarlett": twin-screw car ferry. Shipbuilder, 71 (Apr 64) p.170-1. il.

**SHIPS, "Fides"**

Bulk carrier construction at C.R.D.A. yards. Shipbuilding & Shipping Record, 103 (16 Apr 64) p.514-5. il.

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Dual purpose ship for Great Lakes. Shipping World, 150 (1 Jan 64) p.13-14. il.

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Dutch-built "paragraph" reefer. Shipping World, 150 (21 May 64) p.1033-5. il.

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Roll on/roll off 'Gaelic Ferry' for expanding U.K.-continental trade. Motor Ship, 44 (Mar 64) p.570-2. il.

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"Glafki"—last of eight. Marine Engr. & Naval Architect, 87 (Jul 64) p.330-2. il.

Last of a series of French bulk carriers completed. Shipbuilding & Shipping Record, 103 (28 May 64) p.721-2. il.

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First credit-scheme ship delivered in Scotland. Shipping World & Shipbuilder, 151 (3 Sep 64) p.602-3. il.

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R.W. bridge control in the 'Halifax Star'. Marine Engr. & Naval Architect, 87 (Oct 64) p.479-80. il.

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Defence measures in series of ferries intended for Western Isles Service [The 'Hebrides', first of three 2100-gross ton vessels built for operation by David MacBrayne Ltd.] Motor Ship, 45 (May 64) p.51-3. il.

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French-built 14,980 ton d.w. cargo ship for Norwegian owner. Motor Ship, 45 (Apr 64) p.24-6. il.

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All-refrigerated 2860 ton d.w. 'Höfsjökull'. Motor Ship, 45 (Jul 64) p.156-7. il.

"Höfsjökull", a 3,000-ton d.w. refrigerated Icelandic vessel. Shipbuilding & Shipping Record, 103 (25 Jun 64) p.846-8. il.

Icelandic cargo ship from Grangemouth Dockyard [Höfsjökull] Shipping World, 150 (18 Jun 64) p.1196-7. il.

Icelandic refrigerator ship 'Höfsjökull'. Marine Engr. & Naval Architect, 87 (Jul 64) p.320-3. il.

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Geared twin-diesel installation in Spanish bulk carrier.  
Motor Ship, 45 (Oct 64) p.293-5. il.

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"Kolejarz", first of a Polish twin-hatch series. Shipbuilding & Shipping Record, 104 (12 Nov 64) p.638-9. il.  
"Kolejarz"—prototype vessel of Polish B512 series.  
Motor Ship, 45 (Oct 64) p.316. il.  
Prototype Polish cargo vessel. Shipping World, 150 (21 May 64) p.1039-40. il.

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Australian interstate seatainer ship. Marine Engr. & Naval Architect, 87 (Oct 64) p.478-9. il.  
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Dutch liner with a 6-cylinder engine capable of 18000 bhp.  
Motor Ship, 45 (Aug 64) p.200-2. il.  
"Koudekerk": fast Dutch cargo liner. Shipping World & Shipbuilder, 151 (6 Aug 64) p.427-31. il. ref.  
"Koudekerk": first vessel to be powered by the Stork large-bore engine. Shipbuilding & Shipping Record, 104 (16 Jul 64) p.73-5. il.  
20-knot "Koudekerk" designed for quick cargo handling.  
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"Lancashire" cargo liner. Shipping World, 150 (8 Jan 64) p.145-6. il.

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"Laponia"—first Arendal-built ship. Shipbuilder, 71 (Jan 64) p.16-18. il.

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"Letaba". Shipbuilder, 71 (Mar 64) p.117-21. il.  
"Letaba"—the largest fruit carrier. Marine Engr. & Naval Architect, 87 (Jan 64) p.3-8. il.  
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Refrigerated cargo ship for South African service.  
Shipping World, 150 (1 Jan 64) p.9-12. il.

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Bulk carrier "Liryc". Shipping World & Shipbuilder, 151 (3 Sep 64) p.670-8. il. refs.

**SHIPS, "Loucas N."**

Belgian-built multi-purpose: cargo ship for Greek ownership.  
Motor Ship, 45 (Apr 64) p.12-16. il.

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Japanese push-button vessel. Shipping World, 150 (23 Jan 64) p.288-9. il.  
Japanese views on ship automation ["Mississippi Maru"]  
Shipbuilding & Shipping Record, 103 (9 Apr 64) p.480-2. il.  
"Mississippi Maru", a dry cargo vessel with extensive automated & remote controls. Shipbuilding & Shipping Record, 103 (9 Jan 64) p.42-6. il.  
29-man crew for Japanese 12000 ton D.W. automated cargo liner. Motor Ship, 44 (Mar 64) p.564-5. il.

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"Mormacargo", first of a new series of 24-knot cargo liners.  
Shipbuilding & Shipping Record, 104 (26 Nov 64) p.701-7. il.

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One year's service of the 'Naess Cavalier'. Motor Ship, 45 (Jun 64) p.131-2. il.

**SHIPS, "Nerlandia"**

Pallet ship "Nerlandia" (abstract) Marine Engr. & Naval Architect, 87 (May 64) p.242+. il.  
Swedish palletised cargo ship. Shipping World, 150 (7 May 64) p.953-5. il.

**SHIPS, "Norbu"**

"Norbu", second of a series of three bulk carriers. Shipbuilding & Shipping Record, 102 (19 Dec 63) p.802-3. il.

**SHIPS, "Northland Prince"**

"Northland Prince": service report on six-month old Canadian container ship. Shipbuilder, 71 (Apr 64) p.165-7. il.

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"Peveril", cargo & cattle carrier for the Liverpool/Isle of Man service. Shipbuilding & Shipping Record, 103 (30 Apr 64) p.582-4. il.

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Refrigerated cargo ship "Polarlicht". Shipping World & Shipbuilder, 152 (5 Nov 64) p.384-90. il.

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Bulk carrier construction at C.R.D.A. yards. Shipbuilding & Shipping Record, 103 (16 Apr 64) p.514-5. il.  
"Poseidon"—a 35000 ton Italian-built bulk carrier. Motor Ship, 45 (Jun 64) p.135. il.

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"Priboj": refrigerated cargo ship for Russia. Shipping World & Shipbuilder, 152 (3 Dec 64) p.632-5. il.  
Russian refrigerated cargo ship "Priboj". Shipbuilding & Shipping Record, 104 (19 Nov 64) p.670-2. il.

**SHIPS, "Republica de Colombia"**

'Republica de Colombia' first of a series of dry cargo vessels for the Colombian state fleet. Shipbuilding & Shipping Record, 104 (15 Oct 64) p.506-10. il.

**SHIPS, "Riviera"**

"Riviera": bulk carrier of 19,770 tons deadweight on a load draught of 31ft 2½ in. Shipping World & Shipbuilder, 151 (6 Aug 64) p.422-6. il.

**SHIPS, "Sagastrand"**

Series of 12 Hungarian-built ships for Norwegian owner [1620 ton d.w. "Sagastrand" and "Sagatun"] Motor Ship, 45 (May 64) p.81-2. il.

**SHIPS, "Saguenay"**

Unusual boost for main diesel engines. Shipping World & Shipbuilder, 152 (12 Nov 64) p.450-2. il.

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Coaster for extended performance: Dorman-engined "Saint Fergus" to run for four years between machinery overhauls. Motor Ship, 45 (Oct 64) p.288-9. il.

**SHIPS, "Sakumo Lagoon"**

'Sakumo Lagoon': first of four cargo liners for the Black Star Line. Shipping World & Shipbuilder, 151 (2 Jul 64) p.88-92. il.

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"Silksworth": a bulk carrier with a deadweight of 24,840 tons on a full load draught of 32ft. 7½ in. Shipping World & Shipbuilder, 151 (2 Jul 64) p.99-101. il. ref.

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'Southampton Castle' launched. Marine Engr. & Naval Architect, 87 (Nov 64) p.510-11. il.  
"Southampton Castle" the first of two high-powered, twin-screw Union-Castle cargo liners. Shipbuilding & Shipping Record, 104 (29 Oct 64) p.573-4. il.

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660 ton d.w. 'Swazi Coast' for Coast Lines Ltd. Motor Ship, 45 (Apr 64) p.21-3. il.

**SHIPS, "Tsugaru Maru"**

Highly automated ferry for Japanese National Railways [Tsugaru Maru] Motor Ship, 45 (Aug 64) p.213-15. il.  
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"Tsugaru Maru", a Japanese-built & operated train ferry for mainland to Hokkaido island link. Shipbuilding & Shipping Record, 103 (25 Jun 64) p.850-3. il.  
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India's largest merchant ship [Vikram Jayanti] Shipping World, 150 (4 Jun 64) p.1115+. il.



**SHIPS, "Ville de Bordeaux"**

Automatisation à la française. Marine Engr. & Naval Architect, 87 (Oct 64) p.462-9. il.

New approach to machinery operation. Motor Ship, 45 (Sep 64) p.243-7. il.

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Japanese cargo liner with novel hull form. Shipping World, 150 (5 Mar 64) p.531-3. il.

£1.3 million 20.1 knot Japanese economy liner. Motor Ship, 45 (Apr 64) p.39-41. il.

"Yamashiro Maru", a Japanese cargo liner of advanced design. Shipbuilding & Shipping Record, 103 (5 Mar 64) p.310-13. il.

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Successful first year at Arendal. Shipping World, 150 (25 Jun 64) p.1305+. il.

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Reconstruction at Ansaldo. Shipping World, 150 (16 Apr 64) p.800-1. il.

**SHIPYARDS, Govan**

Modernisation at Fairfield. Shipbuilder, 71 (May 64) p.251-3. il.

Modernisation plan at Fairfields. Shipping World, 150 (23 Apr 64) p.870-2. il.

Reorganisation and reconstruction of shipyard at Govan. Engineer, 217 (29 May 64) p.950-2. il.

Steel working in the new Fairfield yard. Marine Engr. & Naval Architect, 87 (Jun 64) p.260-2. il.

**SHIRLEY INSTITUTE**

Selling research to industry. H. W. Griffith. Brit. Manufacturer, 48 (Sep 64) p.21+. il.

Shirley Institute. Chemistry & Industry (27 Jun 64) p.1179-80. il.

**SHOCK, Electric, Spark triggered arcs. See ARCS, Spark triggered, Electrodes, Electric shock****SHOCK ABSORBERS, Fluid**

Greer-Mercier 'hydra-cushion'. Hydraulic Pneumatic Power & Controls, 10 (Mar 64) p.168-9. il.

**SHOCK ABSORBERS, Materials**

Simple parameter for the selection of materials subjected to shock. P. Grootenhuis. Environmental Engng. Q. (Dec 63) p.22-3. il. refs.

**SHOCK ABSORBERS (Motor cars) Pistons, Grinding, Diamond**

Dutch firm thrives on shock treatment [Koni] P. Evans.

Industrial Diamond Rev., 24 (Aug 64) p.200-2. il.

**SHOCK ABSORBERS (Motor vehicles) Testing, Vibrators, Hydraulic**

Dowty Rotol vibration equipment. Automobile Engr., 54 (Feb 64) p.57-9. il.

Hi-fi hydraulics reproduce taped road shock [Dowty Rotol] Instrument & Control Engng. (Jun 64) p.6-9. il.

Hydraulic vibrators assist structure analysis in automotive industry [Dowty Rotol] Design & Components in Engng. (13 Feb 64) p.6-10. il.

Vibration techniques for automotive development: electronic control of hydraulic units. Process Control & Automation, 11 (Feb 64) p.64-6. il.

**SHOCK ABSORBERS, Springs, Rubber**

Anti-vibration mountings and shock absorbing buffers—employing the principle of hydrostatic compression of elastomer. Power & Works Engng., 59 (Jan 64) p.33-5. il.

**SHOCK GAS DISCHARGE. See GAS DISCHARGE, Shock****SHOCK TESTS. See IMPACT TESTS****SHOCK TUBES**

Northampton College shock tube & shock tunnel. A. Scibor-Rylski & B. Barry. Aircraft Engng., 36 (Mar 64) p.80-2. il. refs.

**SHOCK TUBES, Chemical, Decomposition studies, Liquid hydrocarbons. See HYDROCARBONS, Liquid, Decomposition, Studies, Shock tubes, Chemical****SHOCK TUBES, Diaphragms, Scribes**

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TECHNOLOGY, Siberia

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DAMS, Guma

**SIEVES. See SCREENS****SIEVES, Molecular. See MOLECULAR SIEVES****SIEVES, Molecular, Pumps, Vacuum. See VACUUM, Pumps (Sorption)****SIEVES, Molecular, Sorption, Paraffins. See PARAFFINS, Sorption, Molecular sieves****SIGHT. See VISION****SIGHT LINES, Theatres. See THEATRES, Sight lines****SIGHTS, Telescopic, Firearms. See FIREARMS, Sight, Telescopic****SIGNAL FLOW GRAPHS, Vibrations. See VIBRATIONS, Signal flow graphs****SIGNALLING SYSTEMS, Railways**

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**SIGNBOARDS**

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**SIGNWRITING, Commercial vehicle bodies. See VEHICLES, Commercial, Bodies, Signwriting****SIGNWRITING, Furniture transport van bodies. See****FURNITURE, Transport, Vans, Bodies, Signwriting****SILAGE, Determination of dry content, Distillation, Toluene**

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- SILICA-BARIA-ALUMINA GLASS**, Glass-ceramics production. See **GLASS-CERAMICS**, Production, Glass, Baria-alumina-silica
- SILICA GEL**, Adsorption, Butane. See **BUTANE**, Adsorption (Silica gel)
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- SILICON**, Diodes, Rectifiers. See **RECTIFIERS**, Diodes, Silicon
- SILICON**, Diodes, Rectifiers, Electric locomotives. See **LOCOMOTIVES**, Electric, Rectifiers, Diodes, Silicon
- SILICON**, Diodes, Rectifiers, Power coaches, Electric trains. See **TRAINS**, Electric, Power coaches, Rectifiers, Diodes, Silicon
- SILICON**, Diodes, Switching circuits, Half wave magnetic amplifiers, Servomechanisms. See **SERVOMECHANISMS**, Amplifiers, Magnetic, Half wave, Switching circuits, Diodes, Silicon
- SILICON**, Effect on metals. See **METALS**, Effect of silicon
- SILICON**, Effect on nodular iron. See **IRON**, Nodular, Effect of silicon
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- SILICON**, Multipliers, Detectors, Mass spectrometers. See **MASS SPECTROMETERS**, Detectors, Multipliers, Silicon
- SILICON**, Planar transistors. See **TRANSISTORS**, Planar, Silicon
- SILICON**, Precipitates, Nickel-Chromium-Steel. See **STEEL-CHROMIUM-NICKEL**, Precipitates, Silicon
- SILICON**, Reactivity, Liquid iron. See **IRON**, Liquid, Silicon reactivity
- SILICON**, Semiconductors. See **SEMICONDUCTORS**, Silicon
- SILICON**, Substrates, Microminiature electronic circuits. See **CIRCUITS**, Electronics, Microminiature, Substrates, Silicon
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**SINTERED CARBIDES.** See CARBIDES, Sintered**SINTERED METAL BRAKE LININGS.** See BRAKES, Linings, Metal, Sintered**SINTERED METAL CLUTCH PLATES.** See CLUTCHES, Plates, Metal, Sintered**SINTERED METALS, Bonding, Diamond tools.** See TOOLS, Diamond, Bonding, Metals, Sintered**SINTERED METALS, Filters.** See FILTERS, Metals, Sintered**SINTERED NIOBIUM-TIN TUBES, Superconducting magnets.** See MAGNETS, Superconducting (Niobium-Tin tubes, Sintered)**SINTERED P.V.A.-P.V.C., Sheets, Carriers, Partition Chromatography.** See CHROMATOGRAPHY, Partition, Carriers, Sheets, P.V.A.-P.V.C., Sintered**SINTERED P.V.A.-P.V.C., Sheets, Supports, Electrophoresis.** See ELECTROPHORESIS, Supports, Sheets, P.V.A.-P.V.C., Sintered**SINTERED POWDER METALLURGY, Iron.** See IRON, Powder metallurgy, Sintered**SINTERED STEEL.** See STEEL, Sintered**SINTERED URANIUM DIOXIDE, Fuels, Gas cooled nuclear reactors.** See NUCLEAR REACTORS, Gas cooled, Fuels, Uranium dioxide, Sintered**SINTERED URANIUM DIOXIDE, Fuels, Nuclear reactors.** See NUCLEAR REACTORS, Fuels, Uranium dioxide, Sintered**SINTERING, Aluminium, Coating, Steel, Wires.** See WIRES, Steel, Coating, Aluminium, Sintering**SINTERING, Ice.** See ICE, Sintering**SINTERING, Iron ores.** See IRON, Ores, Sintering**SINTERING, Magnesium ferrite.** See MAGNESIUM FERRITE, Sintering**SINTERING, Porosity**

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FERRITES

FERROELECTRICITY

SEMICONDUCTORS

TRIODES, Dielectric

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CARBON DIOXIDE, Absorption, Packed columns,  
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**SOLVENTS, Corrosion, Refrigeration equipment, Purification, Argon. See ARGON, Purification, Refrigeration, Equipment, Corrosion, Solvents****SOLVENTS, Determination, Paint. See PAINT, Determination of solvents****SOLVENTS, Effect on polarimetry, Cellulose acetate. See CELLULOSE ACETATE, Polarimetry, Effect of solvents****SOLVENTS, Paint. See PAINT, Solvents**

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**SONAR**. See **ECHO RANGING**

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**SORTING**, Parcels. See **PARCELS**, Sorting

**SORTING**, Screws, Telephones. See **TELEPHONES**, Screws, Sorting

**SOUND**

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AUDIOMETRIC

ELECTROACOUSTICS

MACH NUMBER

NOISE

SONIC TESTING

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**STEAM, Turbines, Blades, Radiography, Closed circuit television**

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**STEAM, Turbines, Pumps, Feedwater, Boilers. See BOILERS, Feedwater, Pumps, Steam turbines****STEAM, Turbines, Rotors, Discs, Broaching, Machines**

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STEARIC ACID, Promoters, Drop condensation, Steam. See

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STEARYL ALCOHOL, Monolayers, Barriers, Evaporation, Water. See WATER, Evaporation, Barriers, Monolayers, Stearyl alcohol

STEARYL TARTRATE, Determination, Bread. See BREAD, Determination of stearyl tartrate

**STEATITE, Technical ceramics**

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STEBAKOV PROCESS, Press forming, Steel. See STEEL, Press forming, Stebakov process

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*Chemistry & Industry* (25 Jan 64) p.146-8

Materials and manufacture in 1964: stronger steel for wider purposes. W. E. Duckworth. *New Scientist*, 22 (30 Apr 64) p.283-4

Special steels and alloys. *Iron & Steel*, 37 (Aug 64) p.417-19. il.

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**STEEL—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

*History**Standards**Problems*

*Corrosion*

*Scale*

*Burning*

*Overheating*

*Properties*

*Effect of*

*Mechanical properties*

*Impact resistance*

*Creep*

*Fracture*

*Cracks*

*Embrittlement*

*Permeability*

*Cryogenics*

*Thermal transformat on*

*Hardenability*

*Workability*

*Chemistry*

*Inclusions*

*Technical activities*

*Metallurgy*

*Analysis*

*Determination of*

*Identification*

*Production*

*Manufactures*

*Mills*

*Melting*

*Re-melting*

*Foundry practice*

*Casting*

*Rolling*

*Extrusion*

*Forging*

*Cold heading*

*Press forming*



## STEEL—SUBHEADINGS—Synopsis—cont.

Electroforming  
Heat treatment  
  Quenching  
  Annealing  
  Ausforming  
  Welding  
Coatings  
  Paint  
  Blackening  
  Electroplating  
  Aluminising  
  Hardfacing  
Transport

## Products

Castings  
Forgings  
Scrap

## Types of steel

By state  
  Liquid  
By process  
  Killed  
  Cast  
  Heat treated  
    Nitrided  
    Carbonitrided  
    Precipitation hardened  
  Sintered  
  Welded  
  Coated  
  Painted  
By property  
  Rimming  
  Fatigue resistant  
  High temperature  
  High tensile  
  Silver  
  Free machining  
By phase  
  Ferritic  
  Martensitic  
  Austenitic  
By material  
  Eutectoid  
  Mild  
  Low alloy  
  Stainless  
  Alloys

STEEL, Agricultural equipment. See AGRICULTURAL EQUIPMENT, Steel

STEEL, Agricultural machinery. See AGRICULTURAL MACHINERY, Steel

## STEEL, Alloys

Special steels and alloys. *Iron & Steel*, 37 (Aug 64) p.417-19. il.

## STEEL, Alloys, Austenite, Decomposition, Isothermal

High temperature decomposition of austenite in alloy steels [Chromium steel, vanadium steel, molybdenum steel] J. McCann & K. A. Ridal. *J. of Iron & Steel Inst.*, 202 (May 64) p.441-7. il. refs.

STEEL, Alloys, Bars. See BARS, Steel alloys

## STEEL, Alloys, Corrosion (Chloride solutions) Studies, Potentiostats

Potentiokinetic and corrosion investigations of the corrosion behaviour of alloy steels. M. Pourbaix, L. Klimzack-Mathieu, Ch. Martens, J. Meunier, Cl. Vanleugen-Haghe, L. de Munck, J. Laureys, L. Neelemans & M. Warzee. *Corrosion Science*, 3 (Dec 63) p.239-59. il. refs.

## STEEL, Alloys, Corrosion (Sulphuric acid solutions) Studies, Potentiostats

Potentiokinetic and corrosion investigations of the corrosion behaviour of alloy steels. M. Pourbaix, L. Klimzack-Mathieu, Ch. Martens, J. Meunier, Cl. Vanleugen-Haghe, L. de Munck, J. Laureys, L. Neelemans & M. Warzee. *Corrosion Science*, 3 (Dec 63) p.239-59. il. refs.

## STEEL, Alloys, Corrosion resistant

Methods of increasing the resistance of steel to atmospheric corrosion. K. Barton. *Engrs'. Digest*, 25 (Nov 64) p.97-8. il. refs.

## STEEL, Alloys, Fatigue, Torsion, Effect of hydrostatic pressure

Effect of large hydrostatic pressures on the torsional fatigue strength of two steels. D. J. Burns & J. S. C. Parry. *J. of Mechanical Engng. Science*, 6 (Sep 64) p.293-305. il. refs.

STEEL, Alloys, Forgings, Rotors, Electrical generators. See GENERATORS, Electrical, Rotors, Forgings, Steel alloys

## STEEL, Alloys, Heat treatment, Chemical reactions, Thermodynamics

Thermodynamics of the interaction of atmospheres with alloy steels. R. Littlewood. *J. of Iron & Steel Inst.*, 202 (Feb 64) p.143-6. refs.

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Alloy steelmaking for large forgings: 17th BISRA Junior Steelmaking Conference. J. C. C. Leach. *Steel Times*, 188 (5 Jun 64) p.754-7. il.

High level of activity at alloy steelworks: new methods, new ideas [English Steel Corporation Limited] *Steel Times*, 189 (3 Jul 64) p.20-1. il.

Special steel production and quality control at Swift Levick. *Iron & Steel*, 37 (Dec 64) p.589-94. il.

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Basic research for stronger steel alloys [Sheffield University] *Engng. Designer* (Oct 64) p.13-14. il.

Stronger steel alloys. *Chemical Processing*, 10 (Dec 64) p.22-3. il.

Stronger steel alloys. *Tooling*, 18 (Dec 64) p.61-2

Stronger steel alloys: new basic research framework under construction at Sheffield University. *Corrosion Prevention & Control*, 11 (Nov 64) suppl. p.xii-xiii

STEEL, Alloys, Rods. See RODS, Steel alloys

STEEL, Alloys, Strips, Tubes. See TUBES, Strips, Steel alloys

## STEEL, Alloys, Tempering, Intermetallic compounds, Precipitation

Fifth stage of tempering. *Metal Treatment*, 31 (Feb 64) p.42

## STEEL, Alloys, Welding, Arc, Gas shielded

Gas-shielded metal-arc welding of alloy steels. A. A. Smith & G. R. Salter. *Brit. Welding J.*, 11 (May 64) p.222-8. il. refs.

## STEEL, Aluminising, Electrophoretic

Electrophoretic deposition of aluminium on steel. *Aluminium Courier* (Jun 64) p.22-4. il.

More about electrophoretic coating aluminium on steel [Elphal] A. E. Williams. *Metalworking Production*, 108 (29 Apr 64) p.40-1. il.

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Hot-dipped aluminium coatings. J. E. Nicholls. *Corrosion Technology*, 11 (Oct 64) p.16-21. il. refs.

## STEEL, Annealing, Furnaces, Gas-fired

Conventional methods of batch annealing developments.

G. A. Hawdon. *Gas World*, 160 (17 Oct 64) p.63-4  
Versatility of gas in steel annealing and normalizing. *Gas World*, 159 (21 Mar 64) p.44-6. il.

## STEEL, Annealing, Furnaces, Gas-fired, Valves, Feed, Faults, Entrained oil

Oil losses from gas washing. T. Cross. *Gas J.*, 318 (3 Jun 64) p.245-8

**STEEL, Ausformed, Wires.** See **WIRES, Steel, Ausformed**

**STEEL, Ausforming**

Strengthening of steel, pt.1. W. E. Duckworth. *Iron & Steel*, 37 (Sep 64) p.462-4. il. refs.

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Effect of varying stresses and temperatures on creep strength. R. Montandon & F. Kirchner. *Engrs' Digest*, 25 (May 64) p.98-101. il.

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**STEEL, Austenitic, Cryogenics, X-ray diffraction**

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**STEEL, Austenitic, Effect of aluminium**

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**STEEL, Austenitic, Steam plant, Power stations.** See **POWER STATIONS, Steam plant, Steel, Austenitic**

**STEEL, Austenitic, Welded, Heat treatment, Zone cracking, Effect of cobalt**

Effect of cobalt on the susceptibility of welded austenitic steels to heat-affected zone cracking during heat treatment. D. M. Haddrill & R. G. Baker. *Brit. Welding J.*, 11 (Sep 64) p.453-61. il. refs.

**STEEL, Bainitic, Sections.** See **SECTIONS, Steel, Bainitic**

**STEEL, Barges, Coal.** See **COAL, Barges, Steel**

**STEEL, Bars.** See **BARS, Steel**

**STEEL, Bars, Reinforced concrete.** See **CONCRETE, Reinforced, Bars, Steel**

**STEEL, Beams.** See **BEAMS, Steel**

**STEEL, Billets.** See **BILLETS, Steel**

**STEEL, Blackening**

Black oxide coatings, pt.1. A. Tomlinson. *Product Finishing*, 17 (Apr 64) p.49-55. il.

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**STEEL, Blades, Steam turbines.** See **STEAM, Turbines, Blades, Steel**

**STEEL, Blooms.** See **BLOOMS, Steel**

**STEEL, Bodies, Rolling stock (Passenger, Railways).** See **ROLLING STOCK (Passenger, Railways) Bodies, Steel**

**STEEL, Boilers.** See **BOILERS, Steel**

**STEEL, Bridge components.** See **BRIDGES, Components, Steel**

**STEEL, Bridges.** See **BRIDGES, Steel**

**STEEL, Building materials, Housing.** See **HOUSING, Building materials, Steel**

**STEEL, Burning, Precipitation**

New examination of the phenomena of overheating and burning of steels. I. S. Brammar. *Iron & Steel*, 36 (18 Dec 63) p.650-2

**STEEL, Carbonitrided, Fatigue**

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**STEEL, Cases, Engines, Rockets.** See **ROCKETS, Engines, Cases, Steel**

**STEEL, Cast, Continuous, Forming**

Processing of continuously cast steel. R. Rosegger. *Steel Times*, 189 (30 Oct 64) p.622-8. il. refs.

**STEEL, Cast, Heat-resistant**

Cast heat-resisting ferrous alloys. R. H. T. Dixon & J. Cumberland. *Foundry Trade J.*, 116 (11 Jun 64) p.721.6. il.

Cast heat-resisting ferrous alloys, pt.2. R. H. T. Dixon & J. Cumberland. *Foundry Trade J.*, 116 (25 Jun 64) p.785-91. il.

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New methods in the UK... for producing steel castings. M. C. Lloyd. *Foundry Trade J.*, 116 (27 Feb 64) p.259-67. il. refs.

New methods in the U.K. for producing steel castings (contd.) M. C. Lloyd. *Foundry Trade J.*, 116 (12 Mar 64) p.331-41. il. refs.

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**STEEL, Casting, Cavityless**

Full-mould casting process. *Foundry Trade J.*, 116 (2 Jan 64) p.3-8. il.

**STEEL, Casting, Continuous**

Continuous casting. *Steel Times*, 188 (24 Jan 64) p.112-13. il.

Continuous casting at Appleby-Frodingham. R. Johnson, J. W. Middleton & D. Ford. *J. of Iron & Steel Inst.*, 202 (Mar 64) p.193-208. il.

Continuous casting at Barrow Steel Works. A. Jackson. *Steel Times*, 188 (3 Jan 64) p.18-22. il.

Continuous casting at Motala, Sweden. *Engineer*, 217 (27 Mar 64) p.591-2. il.

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Curved mould continuous casting. *Engineer*, 217 (3 Apr 64) p.608-9. il.

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Focus on continuous casting of steel at autumn meeting. *Steel Times*, 189 (4 Dec 64) p.794-8. il.

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Practice of continuous casting for steel. J. S. Morton. *Metallurgical Revs.*, 9 no.34 (1964) p.121-77. il. refs.

Progress in curved continuous casting. *Engineering*, 197 (27 Mar 64) p.453-5. il.

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Swedish continuous-casting plant [Aktiebolaget Motala Verkstad] Metal Industry, 104 (13 Feb 64) p.220-1. il.

**STEEL, Casting, Continuous, Bending**

New operational and technical developments in the continuous casting of steel, pt.2: technique of bending the sections during continuous casting. *Steel Times*, 189 (25 Sep 64) p.426-7. il.

**STEEL, Casting, Continuous, Control systems**

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**STEEL, Casting, Continuous, Electric motors**

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**STEEL, Casting, Continuous, Lubrication**

Lubricating molten steel. *Scientific Lubrication*, 16 (May 64) p.20-2. il.

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Mould lubrication for continuous casting of steel. *Engineer*, 217 (14 Feb 64) p.310. il.

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**STEEL, Casting, Continuous, Machines**

Continuous casting: the model 'S' machine. *Steel Times*, 188 (1 May 64) p.571. il.

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Electrical methods for assisting the feeding of steel castings. A. P. Riley & A. W. Scott. *Foundry Trade J.*, 116 (12 Mar 64) p.323-8. il. ref.

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**STEEL, Casting, Fluxes, Slags**

Casting fluxes give superior ingots and higher yields. Z. Stokowiec & T. Bambrick. *Brit. Steelmaker*, 30 (Feb 64) p.50-2. il.

**STEEL, Casting, Ladles, Stoppers, Control, Remote**

Remote control of steel casting ladle stoppers. A. I. Sapko et al. *Steel Times*, 189 (16 Oct 64) p.566-7. il.

**STEEL, Casting, Moulds, Binders, Alkyd resins**

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**STEEL, Casting, Moulds, Cores, Binders**

Some factors affecting the choice of cold-setting methods of core making. E. Parkes, W. Andrews & J. Walker. *Brit. Foundryman*, 67 (May 64) p.235-53. il. refs.

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**STEEL, Casting, Moulds, Shell**

Shaw process in America. *Foundry Trade J.*, 116 (4 Jun 64) p.701-5. il.

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Factors affecting the surface quality of steel castings. J. M. Middleton. *Brit. Foundryman*, 57 (Jan 64) p.1-19. il. refs.

**STEEL, Casting, Vacuum**

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Samuel Fox & Company installs 110-ton vacuum degassing plant. A. Thorpe & G. F. Jackson. *Steel Times*, 189 (18/25 Dec 64) p.851+. il.

**STEEL, Castings**

Economic buying of castings. E. V. Phillips. *Foundry Trade J.*, 116 (19 Mar 64) p.363-5

**STEEL, Castings, Gasholes**

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**STEEL, Castings, India**

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**STEEL, Castings, Inspection**

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**STEEL, Castings, Inspection, Spectroscopy, Emission**

Quality control of steel castings [Quantovac spectrometer at K. & L. Steelfounders & Engineers, Letchworth] *Process Control & Automation*, 11 (Jun 64) p.264-5. il.

**STEEL, Castings, Radiography**

Radiography at Firth Brown Ltd. D. W. Taylor. *Quality Engr.*, 28 (Sep/Oct 64) p.148-55. il.

**STEEL, Castings, Research**

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SANDSTONE

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Related Headings:

PALLETS

WAREHOUSES

**STORAGE, Alcoholic beverages. See ALCOHOLIC BEVERAGES, Storage****STORAGE, Aluminium. See ALUMINIUM, Storage****STORAGE, Aluminium alloys, Sheets. See SHEETS, Aluminium alloy, Storage****STORAGE, Apples. See APPLES, Storage****STORAGE, Bitumen. See BITUMEN, Storage****STORAGE, Bodies manufacture, Motor cars. See MOTOR CARS, Bodies, Manufactures, Storage****STORAGE, Books. See BOOKS, Storage****STORAGE, Chemicals, Swimming baths. See SWIMMING BATHS, Chemicals, Storage****STORAGE, Chlorofluorohydrocarbons, Refrigerants. See CHLOROFLUOROXYDROCARBONS, Refrigerants, Storage****STORAGE, Clothing. See CLOTHING, Storage****STORAGE, Coal. See COAL, Storage****STORAGE, Cocoa beans. See COCOA, Beans, Storage****STORAGE, Compressed air, Gas turbine alternators. See ALTERNATORS, Gas turbines, Compressed air storage****STORAGE, Data. See DATA STORAGE****STORAGE, Data, Aircraft. See AIRCRAFT, Data storage****STORAGE, Data, Radar displays, Traffic control, Air transport. See AIR TRANSPORT, Traffic control, Radar, Displays, Data storage****STORAGE, Data processing media. See DATA PROCESSING, Media, Storage****STORAGE, Discs, Sound records. See DISCS, Sound records, Storage****STORAGE, Drinks, Catering establishments. See****CATERING ESTABLISHMENTS, Drinks, Storage****STORAGE, Equipment**

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STORAGE, Paper, Printing. See PRINTING, Paper, Storage

STORAGE, Peas. See PEAS, Storage

STORAGE, Petroleum. See PETROLEUM, Storage

STORAGE, Photography equipment. See PHOTOGRAPHY, Equipment, Storage

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STORAGE, Town gas equipment. See GAS (Town) Equipment, Storage

STORAGE, Tyndallised meat. See MEAT, Tyndallised, Storage

STORAGE, Underground, Fuel oil. See FUEL OIL, Storage, Underground

STORAGE, Underground, Liquefied petroleum gas. See GAS, Liquefied petroleum, Storage, Underground

STORAGE, Underground, Natural gas. See GAS, Natural, Storage, Underground

STORAGE, Undried grain. See GRAIN, Undried, Storage

STORAGE, Wheat. See WHEAT, Storage

STORAGE, Wood. See WOOD, Storage

STORAGE BATTERIES. See BATTERIES, Secondary

STORAGE BUILDINGS

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BEER, Storage buildings

SILOS

STATIONERY, Storage, Buildings

STORAGE FURNITURE, Offices. See OFFICES, Storage furniture

STORAGE PHOTOCONDUCTIVE CELLS. See PHOTOCONDUCTIVE CELLS, Storage

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FEEDINGSTUFFS, Stored

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STOVES, Oil-fired, Blast furnaces. See FURNACES, Blast, Stoves, Oil-fired

STOVES, Solid fuel heating, Housing. See HOUSING, Heating, Fuels, Solid, Stoves

STOVING, Acrylic paint, Painting, Evaporators, Refrigerators.

See REFRIGERATORS, Evaporators, Painting, Acrylic paint, Stoving

STOVING, Enamelling, Cast iron. See IRON, Cast, Enamelling, Stoving

STOVING, Enamelling, Steel, Sheets. See SHEETS, Steel, Enamelling, Stoving

STOVING, Paint. See PAINT, Stoving

- STOVING, Paint, Bodies, Motor cars. See MOTOR CARS, Bodies, Paint, Stoving
- STOVING, Paint, Electrical engineering components. See ELECTRICAL ENGINEERING, Components, Paint, Stoving
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- STRAIGHTENING, Castings, Steel. See STEEL, Castings, Straightening
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- STRAIN**  
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MICROSTRAIN
- STRAIN, Cracks, Metals, Sheets. See SHEETS, Metals, Cracks, Strain
- STRAIN, Fatigue, Hardened single crystals, Copper. See COPPER, Crystals, Single, Fatigue strain hardened
- STRAIN, Plastic, Niobium. See NIOBIUM, Strain, Plastic
- STRAIN, Plastic, Steel, Strips. See STRIPS, Steel, Plastic strain
- STRAIN, Tensile, Zone melted single crystals, Molybdenum. See MOLYBDENUM, Crystals, Single, Zone melted, Strain, Tensile
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- STRAIN HARDENING, Correlation with fracture, Steel. See STEEL, Fracture, Correlation with strain hardening characteristics
- STRAIN HARDENING, Deep drawing. See DRAWING, Deep, Strain hardening
- STRAIN HARDENING, Face centered cubic metals. See METALS, Face centered cubic, Strain hardening
- STRAIN HARDENING, Iron. See IRON, Strain hardening
- STRAIN HARDENING, Metals, Sheets. See SHEETS, Metals, Work hardening
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- STRATA CONTROL, Mining, Coal. See COAL, Mining, Strata control
- STRATA CONTROL, Pillars, Coal mining. See COAL, Mining, Pillars, Strata control
- STRATFORD-UPON-AVON  
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CANALS, Stratford-upon-Avon  
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**STRENGTH**, Concrete. See **CONCRETE**, Strength

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**STRENGTH**, Curved girders. See **GIRDERS**, Curved, Strength

**STRENGTH**, Fibres, Intermetallic compounds. See **INTER-METALLIC COMPOUNDS**, Fibres, Strength

**STRENGTH**, Glass fibre. See **GLASS FIBRE**, Strength

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**STRENGTH**, Plastics. See **PLASTICS**, Strength

**STRENGTH**, Plated grillages, Warships. See **WARSHIPS**, Grillages, Plated, Strength

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**STRENGTH**, Prestressed concrete, Bridges. See **BRIDGES**, Concrete, Prestressed, Strength

**STRENGTH**, Prestressed concrete, Pressure vessels, Nuclear reactors. See **NUCLEAR REACTORS**, Pressure vessels, Concrete, Prestressed, Strength

**STRENGTH**, Reinforced concrete, Helical staircases. See **STAIRCASES**, Helical, Concrete, Reinforced, Strength, Testing

**STRENGTH**, Rock. See **ROCK**, Strength

**STRENGTH**, Stainless steel. See **STEEL**, Stainless, Strength

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BENDING

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COLLAPSE

COMPRESSION

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CRACKS

CREEP

DEFORMATION

DUCTILITY

ELASTIC MODULUS

ELASTICITY

FATIGUE

FLOW STRESS

FRACTURE

HARDNESS

IMPACT RESISTANCE

IMPACT STRENGTH

IMPACT TESTS

LOADING (Stress)

NOTCH TESTING

PHOTOELASTICITY

PLASTIC DEFORMATION

PLASTICITY

RHEOLOGY

RUPTURE

SHEAR

SHEAR LOADING

SHEAR STRESSES

SHEAR TESTS

STIFFNESS

STRAIN

STRESS PROBING

STRESS-STRAIN RELATIONSHIPS

STRESSES

TENSILE LOADING

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STRESS PROBING, Thin walled cylinders. See CYLINDERS, Thin walled, Stress probing

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STRESS RELAXATION, Springs. See SPRINGS, Stress relaxation

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STRESS RELIEVING, Steel-Chromium-Molybdenum-Vanadium, Steam plant, Power stations. See POWER STATIONS, Steam plant, Steel-Chromium-Molybdenum-Vanadium, Stress relieving

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STRESS RUPTURE, Thermoplastic pipes. See PIPES, Thermoplastics, Stress rupture

**STRESS-STRAIN RELATIONSHIPS**

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VIRTUAL WORK

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STRESS-STRAIN RELATIONSHIPS, Cast iron. See IRON, Cast, Stress-strain relationships

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STRESS-STRAIN RELATIONSHIPS, Necking, Tensile tests, Copper. See COPPER, Tensile tests, Necking, Stress-strain relationships

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STRESS-STRAIN RELATIONSHIPS, Single crystals, Copper. See COPPER, Crystals, Single, Stress-strain relationships

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STRESSES, Distribution, Deckhouses, Passenger ships. See SHIPS, Passenger, Deckhouses, Stress distribution

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STRESSES, Effect on microstructure, Cast iron. See IRON, Cast, Microstructure, Effect of stresses

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STRIP LINE CAVITY RESONATORS, Microwave, ferrite property measurements. See FERRITES, Microwaves, Properties, Measurements, Cavity resonators, Strip line

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**STRONTIUM, Radioactive, Determination in rain.** See **RAIN, Determination of radiostrontium**

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**STRUCTURAL ANALYSIS, Concrete open circular tanks.** See **TANKS, Circular, Open, Concrete, Structural analysis**

**STRUCTURAL ANALYSIS, Clad pitched roof portal frames, Sheds.** See **SHEDS, Portal frames, Pitched roofs, Clad, Structural analysis**

**STRUCTURAL ANALYSIS, Curved beams.** See **BEAMS, Curved, Analysis**

**STRUCTURAL ANALYSIS, Curved member frames, Structures.** See **STRUCTURES, Frames (Curved member) Analysis**

**STRUCTURAL ANALYSIS, Cylindrical shells.** See **SHELLS, Cylindrical, Structural analysis**

**STRUCTURAL ANALYSIS, Decks, Bridges.** See **BRIDGES, Decks, Structural analysis**

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**STRUCTURAL ANALYSIS, Grillages, Hatch covers, Ships.** See **SHIPS, Hatch covers, Grillages, Analysis**

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**STRUCTURAL ANALYSIS, Inclined leg bridges.** See **BRIDGES, Inclined leg, Structural analysis**

**STRUCTURAL ANALYSIS, Overhead power transmission lines.** See **POWER TRANSMISSION LINES, Overhead, Structural analysis**

**STRUCTURAL ANALYSIS, Pipework.** See **PIPEWORK, Structural analysis**

**STRUCTURAL ANALYSIS, Reinforced concrete, Rectangular beams.** See **BEAMS, Rectangular, Concrete, Reinforced, Structural analysis**

**STRUCTURAL ANALYSIS, Reinforced concrete, Staircases.** See **STAIRCASES, Concrete, Reinforced, Structural analysis**

**STRUCTURAL ANALYSIS, Shear loading, Reinforced concrete beams.** See **BEAMS, Concrete, Reinforced, Shear loading, Structural analysis**

**STRUCTURAL ANALYSIS, Slabs.** See **SLABS, Structural analysis**

**STRUCTURAL ANALYSIS, Stiffened skewed plates.** See **PLATES, Skewed, Stiffened, Analysis**

**STRUCTURAL ANALYSIS, Symmetrical multi-storey framed structures.** See **STRUCTURES, Framed, Multi-storey, Symmetrical, Analysis**

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**STRUCTURAL ANALYSIS, Warren trusses.** See **TRUSSES, Warren, Structural analysis**

**STRUCTURAL ANALYSIS, Welded steel girders, Buildings.** See **BUILDINGS, Girders, Steel, Welded, Structural analysis**

**STRUCTURAL ANALYSIS, Wind pressure, Concrete slab floored tall buildings.** See **BUILDINGS, Tall (Floors, Slabs, Concrete) Wind pressure, Structural analysis**

**STRUCTURAL CERAMICS.** See **CERAMICS, Structural**

**STRUCTURAL DESIGN, Aircraft.** See **AIRCRAFT, Structures, Design**

**STRUCTURAL DESIGN, Composite beams.** See **BEAMS, Composite, Structural design**

**STRUCTURAL DESIGN, Concrete shell roofs.** See **ROOFS, Shell, Concrete, Structural design**

**STRUCTURAL DESIGN, Elastically supported continuous bridges.** See **BRIDGES, Continuous, Elastically supported, Structural design**

**STRUCTURAL DESIGN, Nuclear reactors.** See **NUCLEAR REACTORS, Structures, Design**

**STRUCTURAL DESIGN, Rigid steel frames, Structures.** See **STRUCTURES, Frames, Steel, Rigid, Design**

**STRUCTURAL DESIGN, Steel, I-section columns.** See **COLUMNS, I-section, Steel, Structural design**

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**STRUCTURAL ENGINEERING**

Related Headings:

ANCHOR PLATES

ARCHES

BEAMS

BRIDGES

BUILDINGS

CHIMNEYS

**STRUCTURAL ENGINEERING**

Related Headings—cont.

COLUMNS  
EARTHWORK  
FOUNDATIONS  
GRIDWORKS  
GRILLAGES  
MASTS  
SHELLS  
STRUTS  
TRUSSES  
TUNNELS

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FENCES  
GATES  
WALLS

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- STUDIOS, Radio. See RADIO, Studios  
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 STUDIOS, Television. See TELEVISION, Studios  
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- STUDS, Copper—Zirconium, Silicon diodes, Rectifiers. See RECTIFIERS, Diodes, Silicon, Studs, Copper—Zirconium
- STUDS, Threaded, Engines, Motor cars. See MOTOR CARS, Engines, Studs, Threaded
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- STUFFING BOXES, Centrifugal pumps. See PUMPS, Centrifugal, Stuffing boxes
- STYLI, Diamond, Photoelectric engraving, Half tone illustrations. See ILLUSTRATIONS, Half tone, Engraving, Photoelectric scanning, Styli, Diamond
- STYRENE, Polymers. See POLYSTYRENE
- STYRENE-ACRYLONITRILE. See ACRYLONITRILE-STYRENE
- STYRENE-ACRYLONITRILE, Tumblers. See TUMBLERS, Acrylonitrile—Styrene
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- SUBLIMATION, Organic chemicals, Cylindrical pellets. See PELLETS, Cylindrical, Organic chemicals, Sublimation
- SUBMARINE ELECTRICAL CABLES. See CABLES, Electric, Submarine
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- SUBMERGED COMBUSTION. See COMBUSTION, Submerged
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#### **SUDAN**

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ALDOSE

AMINO-DEOXYHEXOSIDES

AMINOSUGARS

GLUCOSE

GLYCOSIDES

METHYL 3-DEOXY-3-PERFLUORO- $\beta$ -L-XYLOPYRANOSIDE

MONOSACCHARIDES

PLANTEOSE

POLYSACCHARIDES

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IRON, Alloys, Embrittlement (Grain boundaries) Sulphides

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SULPHIDES, Ores, Antimony. See ANTIMONY, Ores, Sulphides

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**SULPHUR**, Removal, Impact strength, Low alloy steel. See **STEEL**, Low alloy, Impact strength, Effect of sulphur removal

**SULPHUR**, Removal, Liquid iron. See **IRON**, Liquid, Sulphur removal

**SULPHUR**, Removal, Liquid steel. See **STEEL**, Liquid, Sulphur removal

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**SULPHUR DIOXIDE**, Binding compounds, Determination, Ciders. See **CIDERS**, Determination of sulphur dioxide binding compounds

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**SULPHUR DIOXIDE**, Determination, Beer. See **BEER**, Determination of sulphur dioxide

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**SULPHUR DIOXIDE**, Power stations, Air pollution. See **AIR POLLUTION**, Power stations, Sulphur dioxide

**SULPHUR DIOXIDE**, Removal from flue gas, Power stations, Sulphuric acid production. See **SULPHURIC ACID**, Production, Power station flue gas, Removal of sulphur dioxide

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**SULPHURETTED HYDROGEN**. See **HYDROGEN SULPHIDE**

**SULPHURIC ACID**, Corrosion, Copper. See **COPPER**, Corrosion, Sulphuric acid

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**SULPHURIC ACID**, Corrosion, Mild steel, Anodes. See **ANODES**, Steel, Mild, Corrosion (Sulphuric acid)

**SULPHURIC ACID**, Corrosion, Stainless steel. See **STEEL**, Stainless, Corrosion, Sulphuric acid

**SULPHURIC ACID**, Corrosion, Steel alloys. See **STEEL**, Alloys, Corrosion, Sulphuric acid

**SULPHURIC ACID**, Digestion, Kjeldahl method, Nitrogen determination. See **NITROGEN**, Determination, Kjeldahl method, Sulphuric acid digestion

**SULPHURIC ACID**, Pickling, Stainless steel. See **STEEL**, Stainless, Pickling, Sulphuric acid

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**ELECTRODES**, Cobalt, Beta, Sulphuric acid electrolytes

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**SULPHURIC ACID**, Solutions, Platinised platinum anodes. See **ANODES**, Platinum, Platinised, Sulphuric acid solutions

SULPHURIC ACID, Solutions, Stainless steel anodes. See ANODES, Steel, Stainless, Sulphuric acid solutions

SULPHURIC ACID-HYDROCHLORIC ACID, Solutions, Platinum anodes. See ANODES, Platinum, Hydrochloric acid-Sulphuric acid solutions

SULPHURIC ACID-POTASSIUM SULPHATE, Solutions, Manganese-Manganese ion electrodes. See ELECTRODES, Manganese-Manganese ion, Sulphuric acid-Potassium sulphate solutions

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SUPERCARGED TWO-STROKE INTERNAL COMBUSTION ENGINES. See ENGINES (Internal combustion) Two—stroke, Supercarged

**SUPERCARGERS**  
Related Headings:  
TURBOCHARGERS

SUPERCARGERS, Engines, Motor cars. See MOTOR CARS, Engines, Supercargers

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NEPTUNIUM, Superconductivity  
NIOBIUM, Crystals, Single, Superconductivity  
NIOBIUM STANNIDE, Superconductivity  
PLUTONIUM, Superconductivity  
STRONTIUM TITANATES, Superconductivity  
TIN, Alloys, Superconductivity  
TIN, Superconducting  
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**SUPERCritical PRESSURE, Steam.** See STEAM, Supercritical pressure

**SUPERFLUIDITY, Liquid helium.** See HELIUM, Liquid, Superfluidity

**SUPERGAIN AERIALS.** See AERIALS, Supergain

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**SUPERHEATERS (Ships) Oil-fired, Deposits, Fireside**

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- SUPERSATURATION**, Effect on scale formation, Heat exchangers. See **HEAT**, Exchangers, Scale, Formation, Effect of supersaturation
- SUPERSONIC AIRCRAFT**. See **AIRCRAFT**, Supersonic
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- SUPERSONIC COMBUSTION**, Ramjets. See **RAMJETS**, Combustion, Supersonic
- SUPERSONIC FLOW**. See **FLUIDS**, Flow, Supersonic
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- SUPPORTS**, Face, Coal mining. See **PIT-PROPS**
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- SUPPORTS**, Roofs, Coal mining. See **COAL**, Mining, Roofs, Supports
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- GLUCOSE ALKYLOXYMETHYL ETHERS**
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**TANNING**

Related Headings:

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RETANNING

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**TANNING, Leather, Soles, Shoes.** See SHOES, Soles, Leather, Tanning

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WATTLE, Tannin

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**TANTALATES METAL (GROUP 3) OXIDE.** See METAL (GROUP 3) OXIDE TANTALATES

**TANTALUM**

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**TANTALUM, Effect on mechanical properties, Mild steel.** See STEEL, Mild, Mechanical properties, Effect of tantalum

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**TANZANIA**

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RAILWAYS, Construction, Mnyusi-Ruvu

**TAP CHANGERS, Parallel operation, Transformers.** See

TRANSFORMERS, Parallel operation, Tap changers

**TAP CHANGERS, Transformers, Electric locomotives.** See

LOCOMOTIVES, Electric, Transformers, Tap changers

**TAP CHANGERS, Transformers, Power coaches, Electric**

trains. See TRAINS, Electric, Power coaches, Trans-

formers, Tap changers

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See

IRRIGATION, Tapakuma

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QUENCY, Discrimination, Magnetic tape

**TAPE, Magnetic, Recording, Instruments.** See INSTRUMENTS,

Recording, Magnetic tape

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**TAPE, Paper, Conversion from Kimball tags**

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TAPE, Paper, Input units, Computers. See COMPUTERS, Input units, Paper tape

TAPE, Paper, Input units, Computers, Conversion from magnetic tape, Flight recorders. See FLIGHT RECORDERS, Tape, Magnetic, Conversion, Computer inputs, Paper tape

TAPE, Polythene, Wrapping, Steel equipment, Refineries, Petroleum. See PETROLEUM, Refineries, Equipment, Steel, Wrapping, Tape, Polythene

TAPE, Sealing, Paper sacks, Food storage. See FOOD, Storage, Sacks, Paper, Sealing, Tape

TAPE CONTROLLED COMPOSING, Printing. See COMPOSING (Printing) Tape controlled

TAPE CONTROLLED MILLING MACHINES. See MILLING, Machines, Tape-controlled

TAPE FILAMENT WINDING, Reinforced glass fibre plastics. See PLASTICS, Reinforced-Glass fibre, Filament winding, Tape

TAPE HEATING ELEMENTS. See HEATING, Electric, Elements, Tape

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**TAPE RECORDERS**

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**TAPE RECORDERS, Electric motors, Assembly, Adhesives, Araldite, Curing, Ovens, Gas-fired**

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Thorn link quality tests with mass production at Newhaven. *Electronics Weekly* (14 Oct 64) p.9. il.

TAPE RECORDERS, Programmed instruction, Assembly, Electronic equipment. See ELECTRONIC EQUIPMENT, Assembly, Programmed instruction, Tape recorders

TAPE RECORDERS, Sound films. See SOUND FILMS, Tape recorders

TAPE RECORDERS, Sound films, Television. See TELEVISION, Films, Production, Tape recorders

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TAPERED ALUMINIUM SHEETS. See SHEETS, Aluminium, Tapered

TAPERED DUCTS, Turbines. See TURBINES, Ducts, Tapered

TAPHOLE OPENING MACHINES, Blast furnaces. See FURNACES, Blast, Taphole opening machines

TAPIOCA. See CASSAVA

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**TAPPING, Blind hole**

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TAR, Naphthalene production. See NAPHTHALENE, Production, Tar

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COAL TAR

TARGET AIRCRAFT. See AIRCRAFT, Target

**TARGETS, Tracking, Acquisition time, Effect of settling time**

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**TARGETS, Tracking, Operator performance**

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TARNISHING, Thermally etched silver films. See FILMS, Silver, Thermally etched, Tarnishing

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TARPAULINS, Loads, Lorries. See LORRIES, Loads, Tarpaulins

TARS, Coke oven gas. See CUKE, Ovens, Gas, Tars

TARTRAZINE, Indicators, Titrations, Sodium hypobromite determination. See SODIUM HYPOBROMITE, Determination, Titrations, Indicators, Tartrazine

**TASMANIA**

See

HYDROELECTRIC POWER, Tasmania

HYDROELECTRIC POWER STATIONS, Underground, Poatina

**TASTING TESTS, Beer.** See **BEER, Sensory testing**  
**TASTING TESTS, Fish.** See **FISH, Sensory testing**  
**TASTING TESTS, Food.** See **FOOD, Sensory testing**  
**TASTING TESTS, Food preservation.** See **FOOD, Preservation, Sensory testing**  
**TASTING TESTS, Meat.** See **MEAT, Sensory testing**  
**TASTING TESTS, Packaging, Food.** See **FOOD, Packaging, Sensory testing**  
**TASTING TESTS, Powders, Eggs.** See **EGGS, Powders, Tasting tests**  
**TASTING TESTS, Powders, Milk.** See **MILK, Powders, Tasting tests**  
**TASTING TESTS, Spirits distillation.** See **SPIRITS, Distillation, Sensory testing**  
**TASTING TESTS, Wines.** See **WINES, Sensory testing**  
**TAUTOMERISM, Phenylhydrozones-Phenylazoalkanes.** See **PHENYLAZOALKANES-PHENYLHYDROZONES, Tautomerism**  
**TAVERNS.** See **PUBLIC HOUSES**  
**TAXI-CABS, Conversion to motor caravans.** See **MOTOR CARAVANS, Conversion from taxi-cabs**

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**TEACHERS, Technicians, Engineering.** See **ENGINEERING, Technicians, Teachers**

**TEACHERS, Training colleges, Architecture**

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**TEACHING, Control system engineers.** See **CONTROL SYSTEMS, Engineers, Teaching**

**TEACHING, Control systems, Machine tools.** See **MACHINE TOOLS, Control systems, Teaching**

**TEACHING, Electronics.** See **ELECTRONICS, Teaching**

**TEACHING, Engineering.** See **ENGINEERING, Teaching**

**TEACHING, Engineering drawing.** See **ENGINEERING, Drawing, Teaching**

**TEACHING, Heat transfer.** See **HEAT, Transfer, Teaching**

**TEACHING, Languages.** See **LANGUAGES, Teaching**

**TEACHING, Mathematics, Electrical engineering.** See **ELECTRICAL ENGINEERING, Mathematics, Teaching**

**TEACHING, Physics engineering.** See **ENGINEERING, Physics, Teaching**

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**TEACHING, Programmed, Printing.** See **PRINTING, Teaching, Programmed**

**TEACHING, Programmed, Switching circuits.** See **SWITCHING CIRCUITS, Teaching, Programmed**

**TEACHING, Programmed, Technical education.** See **TECHNICAL EDUCATION, Teaching, Programmed**

**TEACHING, Programmed, Workshop practice.** See **WORKSHOP PRACTICE, Teaching, Programmed**

**TEACHING, Radio.** See **RADIO, Teaching**

**TEACHING, Television.** See **TELEVISION, Teaching**

**TEACHING AIDS, Closed circuit television.** See **TELEVISION, Closed circuit, Teaching aids**

**TEACHING AIDS, Engineering drawing.** See **ENGINEERING, Drawing, Teaching aids**

**TEACHING AIDS, Flow, Fluids.** See **FLUIDS, Flow, Teaching aids**

**TEACHING AIDS, Kinetics.** See **KINETICS, Teaching aids**

**TEACHING AIDS, Switching circuits.** See **SWITCHING CIRCUITS, Teaching aids**

**TEACHING AIDS, Technical education.** See **TECHNICAL EDUCATION, Teaching aids**

**TEACHING AIDS, Television.** See **TELEVISION, Teaching aids**

**TEACHING AIDS, Universities, Technical education.** See **TECHNICAL EDUCATION, Universities, Teaching aids**

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**TEARING, Hot, Castings, White iron.** See **IRON, White, Castings, Hot tearing**

**TEARING, Hot, Welded ferritic steel.** See **STEEL, Ferritic, Welded, Hot tearing**

**TEARING, Latex film.** See **FILM, Latex, Tearing**

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**TECHNICAL COLLEGES, Concrete, Precast, Prefabricated**

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**TECHNICAL COLLEGES, Electrical installations**

- Edinburgh's impressive new technical college [Napier] *Electrical Distribution*, 5 (Oct 64) p.172-3

**TECHNICAL COLLEGES, Engineering. See ENGINEERING, Education, Technical colleges****TECHNICAL COLLEGES, Induction courses**

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**TECHNICAL COLLEGES, Liberal studies**

- Approach to liberal studies and engineering. K. B. Atkins. *International J. of Electrical Engng. Education*, 1 (Jun 64) p.605-9

**TECHNICAL COLLEGES, Libraries, Classification**

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- Technical college libraries: pt.2, tuition in library use. J. Cowley. *Technical Education & Industrial Training*, 6 (Sep 64) p.442-4

**TECHNICAL COLLEGES, Social studies**

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**TECHNICAL COLLEGES, Technical writing. See TECHNICAL WRITING, Education, Technical colleges****TECHNICAL COLLEGES, Timetables**

- Time-table manipulator. A. Q. Allan. *Technical Education*, 6 (Mar 64) p.132-5

**TECHNICAL CONFERENCES**

- Problem of communication between professional engineers. *Control*, 8 (Nov 64) p.553

**TECHNICAL CO-OPERATION**

- British aid to developing countries. *Nature*, 204 (19 Dec 64) p.1121-2
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- Handbooks to aid underdeveloped areas. A. M. Hatt-Arnold. *Engineering*, 197 (17 Jan 64) p.67
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- Technical co-operation under the Colombo Plan. *Nature*, 201 (18 Jan 64) p.247-8
- Towards a policy for technical co-operation. *Nature*, 203 (1 Aug 64) p.439-41

**TECHNICAL CO-OPERATION**

- Related Headings:  
**TECHNICAL EDUCATION**, Underdeveloped countries  
**TECHNOLOGY**, Underdeveloped countries  
**TECHNICAL CO-OPERATION, Kosmet (Yugoslavia)**  
 Technical co-operation project. *Chemistry & Industry* (6 Jun 64) p.985

**TECHNICAL EDUCATION**

- Blagdon: catalyst of further education. *Engineering*, 197 (10 Jan 64) p.44-5. il.
- Changing needs in education and training. G. S. Bosworth. *Electrical Rev.*, 174 (19 Jun 64) p.945-6. il.
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- Road to true scientific scholarship. *Nature*, 201 (8 Feb 64) p.533-5
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- Southampton University and the Robbins Report. R. N. M. Robertson. *Advancement of Science*, 21 (Jul 64) p.114-16. il.
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Which student? C. Golding. *Instrn. of Electrical Engrs.*

Students Q. J., 34 (Jun 64) p.235-6

Who trains? K. R. Allen. *Technical Education*, 6 (Jun 64) p.286-8

**TECHNICAL EDUCATION**

Related Headings:

APPRENTICESHIPS

DIP. TECH.

SCHOLARSHIPS

TEACHING

TUTORIALS

**TECHNICAL EDUCATION—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

**Particular localities**

*Great Britain*

*Manchester*

*West Germany*

*Russia*

*Africa*

*East Africa*

*Underdeveloped countries*

**Methods**

*Teaching*

*Teachers*

*Training officers*

*Audio-visual aids*

*Examinations*

**Types of course**

*Sandwich courses*

*Block release*

*Day release*

*Correspondence courses*

*International exchanges*

**Curriculum**

*Liberal studies*

**Grade or system**

*Adult*

*Grammar schools*

*Universities*

*Disabled persons*

**TECHNICAL EDUCATION, Adult, Great Britain**

Revolution in education: training and re-training to cope with the age of automation [National Extension College] T.

Fisk. *Electronics Weekly* (25 Nov 64) p.7: il.

**TECHNICAL EDUCATION, Adult retraining, Activities**

Activity learning and the older worker. E. Belbin & S. M.

Downs. *Ergonomics*, 7 (Oct 64) p.429-37. refs.

**TECHNICAL EDUCATION, Adult retraining, Learning errors, Correction**

'Unlearning' and its relationship to age. E. Belbin, S.

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**TECHNICAL EDUCATION, Adult retraining, Sweden**

Retraining: the Swedish approach. *Times Rev. of Industry & Technology*, 2 (Apr 64) p.89

**TECHNICAL EDUCATION, Agricultural machinery. See AGRICULTURAL MACHINERY, Education****TECHNICAL EDUCATION, Aircraft engineering. See AIRCRAFT, Engineering, Education**

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Particular countries

*Underdeveloped countries*

Education

*Teaching*

Transmission

*V.H.F.*

*U.H.F.*

*Signals*

*Black level*

*Picture quality*

*Line scanning*

Projection

*Recording*

Equipment

*Cameras*

*Transmitters*

*Receivers*

Broadcasts

*Stations*

*Studios*

*Outside broadcasts*

*Cable-links*

*Radio links*

Material televised

*Photography*

*Films*

*Camera-Tape recorder combination*

Systems

*Wired*

*Pay*

*Colour*

*Closed circuit*

Applications

*Teaching aids*

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**TERMINAL BUILDINGS (Ports) Southampton**  
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**TERMINATIONS, Electric cables.** See **CABLES, Electric, Terminations**

**TERMINATIONS, Waveguides.** See **WAVEGUIDES, Termination**

**TERMINOLOGY**  
Related Headings:  
VOCABULARY

**TERMINOLOGY, Astronautics.** See **ASTRONAUTICS, Terminology**

**TERMINOLOGY, Crystal oscillators.** See **OSCILLATORS, Crystal, Terminology**

**TERMINOLOGY, Electrochemistry.** See **ELECTRO-CHEMISTRY, Terminology**

**TERMINOLOGY, Farm building components.** See **FARM BUILDINGS, Components, Terminology**

**TERMINOLOGY, Sound reproduction.** See **SOUND, Reproduction, Terminology**

**TERNARY LOGICAL ELEMENTS, Computers.** See **COMPUTERS, Logical elements, Ternary**

**TERPENES**  
Related Headings:  
DITERPENES  
SESQUITERPENES  
TRITERPENES

**TERPENES, Biosynthesis**  
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**TERPENES, Production, Pinene**  
Perfumery chemicals from pinene. B. Dudley Sully. Chemistry & Industry (15 Feb 64) p.263-7

**TERPENES, Tobacco.** See **TOBACCO, Terpenes**

**TERRITORIAL LIMITS, Fishing.** See **FISHING, Territorial limits**

**TERRY CLOTH, Towels.** See **TOWELS, Terry cloth**

**TERSON SYSTEM, Prefabrication, Flats.** See **FLATS, Prefabrication, Terson system**

**TERYLENE, Fabrics.** See **FABRICS, Terylene**

**TERYLENE, Fabrics, Outerwear.** See **OUTERWEAR, Fabrics, Terylene**



TERYLENE, Industrial clothing, Pottery manufactures. See  
 POTTERY, Manufactures, Protective clothing, Terylene  
 TERYLENE-COTTON, Yarns. See YARNS, Terylene-Cotton

#### TERYLENE-LINEN

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CLOTHING, Military, Fabrics, Terylene-Rayon

TERYLENE-WOOL, Fabrics. See FABRICS, Terylene-Wool

TERYLENE-WOOL, Tops. See TOPS, Terylene-Wool

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Karl Terzaghi 1883-1963. A. Casagrande. Geotechnique, 14  
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TEST BENCHES, Electrical equipment, Motor cars. See

MOTOR CARS, Electrical equipment, Test benches

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Service for industry provided by the BSI Test Centre. C. D.  
 Woodward. Brit. Manufacturer, 48 (Aug 64) p.20-1. il.

#### TESTING

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ENVIRONMENTAL TESTING

#### TESTING, Non-destructive

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Non-destructive testing (summary) W. E. Schall. Electrical  
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#### TESTING, Non-destructive

Related Headings:

EDDY CURRENT TESTING

MAGNETIC TESTING

PENETRANT FLAW TESTING

TESTING, Non-destructive, Aircraft. See AIRCRAFT,

Testing, Non-destructive

TESTING, Non-destructive, Maintenance, Military aircraft. See

AIRCRAFT, Military, Maintenance, Testing, Non-  
 destructive

TESTING, Non-destructive, Nuclear propulsion plant, Ships.

See SHIPS, Nuclear propulsion, Plant, Testing, Non-  
 destructive

TESTING, Non-destructive, Plant, Power stations. See

POWER STATIONS, Plant, Testing, Non-destructive

TESTING, Non-destructive, Steel castings. See STEEL,

Castings, Testing, Non-destructive

TESTING, Sonic. See SONIC TESTING

TESTING, Ultrasonics. See ULTRASONICS, Testing

TETRABROMOETHANE, Separation, Mineral dressing. See

MINERAL DRESSING, Separation, Tetrabromoethane

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Non-aqueous potentiometric determination of tetracene.

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TETRACYANOETHYLENE, Reaction with benzocycloalkenes.

See BENZOCYCLOALKENES, Reaction with tetracyano-  
 ethylene

TETRAHEDRA, Stacking faults, Quenched gold. See GOLD,

Quenched, Stacking faults, Tetrahedra

TETRAHYDROTHIOPHENE, Deodorants, Town gas. See GAS

(Town) Deodorants, Tetrahydrothiophene

#### TETRAPHENYL ETHYLENE, Production, Catalysts,

Benzhydryl chloride, Dimethyl sulphoxide, Carbene-  
 Carbanion reactions

Carbene-carbanion reaction in dimethyl sulphoxide. A.

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See

METALS, Manufactures, Texas

METALS, Mining, Texas

TEXTBOOKS, Education, Chemistry. See CHEMISTRY,

Education, Textbooks

#### TEXTBOOKS, Programmed

Textbooks, teaching machines and printers. Brit. Printer,  
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#### TEXTILES

Related Headings:

ANIMAL FIBRES

BEDSPREADS

BLANKETS

CARDING

CARPETS

COMBING

CORDAGE

CORDS

COTTON

FABRICS

HARD FIBRES

JUTE

KNITTING

LINEN

MAN-MADE FIBRES

RAGS

SEWING

WADDING

WOOL

YARNS

#### TEXTILES-SUBHEADINGS-Synopsis

This synopsis shows, in *italic*, related subheadings which  
 are separated in the alphabetical sequence following.

Education

Research

Classification

Export specifications

Problems

Degradation

Properties

Fibres

Surfaces

Moisture content

Water retention

Chemicals

Technical activities

Testing

Manufactures

Finishing

Dyeing

Dyes

Types of textiles

By process

Dyed

Scoured

By material

Cellulosic

#### TEXTILES, Cellulosic, Dyeing, Reactive dyes

Mechanisms of reaction of reactive dyes with cellulosic and  
 other fibres. O. A. Stamm. J. of Soc. of Dyers &

Colourists, 80 (Aug 64) p.416-22. il. refs.

#### TEXTILES, Chemicals

Developments in textile chemicals and auxiliaries. T. W. J.

Apperley. Textile Recorder, 81 (Jan 64) p.64+. refs.

Recent developments in textile chemicals. A. F. Kertess.

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**TEXTILES, Classification**

Schematic ideas for a technical classification based on the structure of textiles. F. Lopez-Amo. *J. of Textile Inst.*, Trans., 55 (Jan 64) p.54-65. refs.

**TEXTILES, Container materials.** See **CONTAINERS, Fabric****TEXTILES, Degradation, Light**

Effect of light on textiles. A. H. Little. *J. of Soc. of Dyers & Colourists*, 80 (Oct 64) p.527-34. il. refs.

**TEXTILES, Degradation, Ultraviolet radiation**

Protecting textiles from ultra-violet degradation. P. W. Sherwood. *Textile Manufacturer*, 90 (Feb 64) p.54-5

**TEXTILES, Dyed, Determination of metals**

Identification of metals in dyed and printed protein and cellulose textiles. B. C. Burdett. *J. of Soc. of Dyers & Colourists*, 80 (Jul 64) p.370-4. refs.

**TEXTILES, Dyed, Light fastness**

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**TEXTILES, Dyed, Light fastness, Effect of humidity**

Effect of atmospheric contaminants on light fastness. V. S. Salvin. *J. of Soc. of Dyers & Colourist*, 79 (Dec 63) p.687-96. il. refs.

**TEXTILES, Dyeing**

Developments in dyes and dyeing. R. W. Henley. *Dyer, Textile Printer, Bleacher & Finisher*, 131 (6 Mar 64) p.368-72. refs.

Looking to the future in commission dyeing and finishing [J. J. Hadfield Ltd.] *Dyer, Textile Printer, Bleacher & Finisher*, 132 (17 Jul 64) p.130+. il.

New developments in textile dyestuffs. A. J. Hall. *Textile Recorder*, 81 (Jan 64) p.55+

Recent progress in dyeing and finishing techniques. A. T. Peters. *Textile Recorder*, 81 (Jan 64) p.58+. il. refs.

**TEXTILES, Dyeing, Absorption**

Boards between dyes and fibres. I. D. Rattee. *Science Progress*, 52 (Oct 64) p.581-92. il. refs.

**TEXTILES, Dyeing, Machines**

Advances in dyeing and finishing machinery (summary)

J. F. Maulden. *Dyer, Textile Printer, Bleacher & Finisher*, 131 (19 Jun 64) p.937

Modern machine-building for the dyeing industry. *Dyer, Textile Printer, Bleacher & Finisher*, 132 (4 Sep 64) p.362-3. il.

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**TEXTILES, Dyeing, Methods, Identification**

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**TEXTILES, Household.** See **HOUSEHOLD TEXTILES****TEXTILES, Industry, Australia**

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Textile industry development in primary producing & underdeveloped countries. J. B. M. Evans. *Textile Weekly*, 64 (31 Jul 64) p.172+

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Valisère Grenoble. B. Wardman. *Hosiery Trade J.*, 71 (Mar 64) p.102-5. il.

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Air conditioning & dust extraction: unit construction principles of Luwa textile mill plant. *Textile Weekly*, 63 (13 Dec 63) p.1141+. il.

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Special slide rules for textile calculations. R. M. Dawson. *Textile Inst. & Industry*, 1 (Dec 63) p.10-11. refs.

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Quality control can give more sales at lower cost. N. L. Enrick. Skinner's Record, 38 (Feb 64) p.107+

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**TEXTILES, Manufactures, Power supplies**

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**TEXTILES, Manufactures, Steam supplies**

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TEXTURED ACRYLIC FIBRE KNITTING YARNS. See KNITTING, Yarns, Acrylic fibres, Textured

TEXTURED ACRYLIC FIBRE YARNS. See YARNS, Acrylic fibres, Textured

TEXTURED CONCRETE. See CONCRETE, Textured

TEXTURED FILAMENT NYLON YARNS, Carpets. See CARPETS, Yarns, Nylon, Filament, Textured

TEXTURED MAN-MADE FIBRES, Knitting yarns. See KNITTING, Yarns, Man-made fibres, Textured

TEXTURED MAN-MADE FIBRES, Yarns. See YARNS, Man-made fibres, Textured

TEXTURED MAN-MADE FIBRES, Yarns, Fabrics, Knitwear, See KNITWEAR, Fabrics, Man-made fibres (Textured yarn)

TEXTURED NYLON FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon, Textured

TEXTURED NYLON 6 FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon 6, Textured

TEXTURED NYLON STOCKINGS. See STOCKINGS, Nylon, Textured

TEXTURED NYLON YARNS, Knitted fabrics. See FABRICS, Nylon, Knitted, Textured yarn

TEXTURED TUBULAR NYLON FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon, Tubular, Textured

TEXTURED TUBULAR POLYESTER FIBRE FABRICS, Knitwear. See KNITWEAR, Fabrics, Polyester fibres, Tubular, Textured

TEXTURED YARNS. See YARNS, Textured

THAILAND

See

TIN, Mining, Thailand

TEXTURED NYLON FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon, Textured

TEXTURED NYLON 6 FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon 6, Textured

TEXTURED NYLON STOCKINGS. See STOCKINGS, Nylon, Textured

TEXTURED NYLON YARNS, Knitted fabrics. See FABRICS, Nylon, Knitted, Textured yarn

TEXTURED TUBULAR NYLON FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon, Tubular, Textured

TEXTURED TUBULAR POLYESTER FIBRE FABRICS, Knitwear. See KNITWEAR, Fabrics, Polyester fibres, Tubular, Textured

TEXTURED YARNS. See YARNS, Textured

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TEXTURED NYLON FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon, Textured

TEXTURED NYLON 6 FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon 6, Textured

TEXTURED NYLON STOCKINGS. See STOCKINGS, Nylon, Textured

TEXTURED NYLON YARNS, Knitted fabrics. See FABRICS, Nylon, Knitted, Textured yarn

TEXTURED TUBULAR NYLON FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon, Tubular, Textured

TEXTURED TUBULAR POLYESTER FIBRE FABRICS, Knitwear. See KNITWEAR, Fabrics, Polyester fibres, Tubular, Textured

TEXTURED YARNS. See YARNS, Textured

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TEXTURED NYLON FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon, Textured

TEXTURED NYLON 6 FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon 6, Textured

TEXTURED NYLON STOCKINGS. See STOCKINGS, Nylon, Textured

TEXTURED NYLON YARNS, Knitted fabrics. See FABRICS, Nylon, Knitted, Textured yarn

TEXTURED TUBULAR NYLON FABRICS, Knitwear. See KNITWEAR, Fabrics, Nylon, Tubular, Textured

TEXTURED TUBULAR POLYESTER FIBRE FABRICS, Knitwear. See KNITWEAR, Fabrics, Polyester fibres, Tubular, Textured



## THAMES ESTUARY

See

BOATS, Motor, Anchorages, Thames Estuary  
BOATS, Motor, Navigation, Tidal waters, Thames Estuary

## THAMES RIVER

See

BOATS, Motor, Operation, Rivers, Thames

## THATCHED ROOFS. See ROOFS, Thatched

## THAWING, Frozen gutted cod. See COD, Gutted, Frozen, Thawing

## THAWING, Sea-frozen cod. See COD, Sea-frozen, Thawing

## THEATRES

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## THEATRES, Air conditioning

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## THEATRES, Baltimore

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## THEATRES, Communications, Equipment

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## THEATRES, Coventry

Belgrade theatre. Architects' J., 140 (29 Jul 64) p.299-302. il.

## THEATRES, Design

Auditoria, stages and ancillary spaces, fixtures and equipment: briefing guide, pt.2. Architects' J., 140 (15 Jul 64) p.171-92. il.

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Theatre design, pt.3: comparative analysis of traditional theatres. E. Jordan. Architects' J., 140 (5 Aug 64) p.345-60. il.

## THEATRES, Ealing

Questors theatre. Architects' J., 140 (29 Jul 64) p.291-7. il.

## THEATRES, Eastbourne

Eastbourne's new Congress Theatre shows a varied use of concrete finishes. Concrete Q. (Oct/Dec 63) p.25-9. il.

## THEATRES, Exits

Auditorium design—means of escape. Architects' J., 140 (15 Jul 64) information sheet 1265. il.

## THEATRES, Heating

Theatre heating and ventilation. Architects' J., 140 (29 Jul 64) information sheet 1268. il. refs.

## THEATRES, Leicester

Leicester's £24,000 theatre 'an exercise in economy'. Municipal J., 71 (27 Dec 63) p.3997-8. il.

## THEATRES, Lighting

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Introducing electrical engineers to the theatre. P. N. Jakeman. Instn. of Electrical Engrs. Students Q. J., 34 (Mar 64) p.126-34. il. refs.

## THEATRES, Lighting, Platforms

Lighting platform: Playhouse theatre, Wellington Circus, Nottingham. Architects' J., 139 (4 Mar 64) p.531-2. il.

## THEATRES, Managerial spaces

Theatre spaces: public spaces, managerial spaces. Architects' J., 140 (2 Sep 64) information sheet 1272. il.

## THEATRES, Minneapolis

Tyrone Guthrie Theatre, Minneapolis. Architectural Design, 34 (Aug 64) p.394-400. il.

## THEATRES, Nottingham

Nottingham Playhouse. Builder, 206 (10 Jan 64) p.59-64. il.

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£350,000 Nottingham Playhouse completed. Contract J., 197 (2 Jan 64) p.21-2. il.

## THEATRES, Open air, Parks. See PARKS, Theatres, Open air

## THEATRES, Operating. See HOSPITALS, Operating theatres

## THEATRES, Performers' spaces

Theatre spaces: performers spaces and rehearsal spaces.

Architects' J., 140 (2 Sep 64) information sheet 1271. il.

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CRYOMETRY

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THERMAL CONDUCTIVITY, Liquids. See LIQUIDS, Thermal conductivity

THERMAL CONDUCTIVITY, Magnesium. See MAGNESIUM, Thermal conductivity

THERMAL CONDUCTIVITY, Polyatomic gases. See GASES, Polyatomic, Thermal conductivity

THERMAL CONDUCTIVITY, Rock. See ROCK, Thermal conductivity

THERMAL CONDUCTIVITY, Solids. See SOLIDS, Thermal conductivity

THERMAL CONDUCTIVITY, Thermoelectric cooling materials. See COOLING, Thermoelectricity, Materials, Thermal conductivity

THERMAL CONDUCTIVITY, Wood. See WOOD, Thermal conductivity

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THERMAL CRACKING, Refining, Petroleum. See PETROLEUM, Refining, Cracking, Thermal

THERMAL CYCLING, Dimensional changes, Ferric-oxide-magnesium oxide. See FERRIC-OXIDE-MAGNESIUM OXIDE, Dimensional changes, Thermal cycling

THERMAL DECOMPOSITION, Aliphatic alcohols determination. See ALCOHOLS, Aliphatic, Determination, Thermal decomposition

THERMAL DECOMPOSITION, Aromatic polypyromellitimide. See POLYPYROMELLITIMIDE, Aromatic, Thermal decomposition

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THERMAL DECOMPOSITION, Cross linked P.T.F.E. See P.T.F.E., Cross linked, Thermal decomposition

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- THERMAL EXPANSION, Irradiated uranium, Fuels, Nuclear reactors. See NUCLEAR REACTORS, Fuels, Uranium, Irradiated, Thermal expansion
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- THERMAL EXPANSION, Polyesters, Coatings. See COATINGS, Polyesters, Thermal expansion
- THERMAL EXPANSION, Pyrolytic graphite. See GRAPHITE, Pyrolytic, Thermal expansion
- THERMAL EXPANSION, Resin binders, Cores, Moulds. See MOULDS, Cores, Binders, Resin, Thermal expansion
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- THERMAL INSULATION, Expanded polyurethane. See POLYURETHANE, Expanded, Thermal insulants
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- THERMAL INSULATION, Pipes. See PIPES, Insulation, Thermal
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**THERMOMETERS, Resistance, Tungsten, Exhaust temperature measurement, Internal combustion engines.** See **ENGINES** (Internal combustion) Exhaust, Temperature, Measurement, Thermometers, Resistance, Tungsten

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**THERMOMETERS, Wet & dry bulb.** See **PSYCHROMETERS**

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**THERMOPLASTICS**

## Related Headings:

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- ACRYLONITRILE-STYRENE
- CELLULOSE ACETATE
- FLUOROCARBONS, Resins
- NYLON
- P.T.F.E.
- P.V.A.
- P.V.C.
- PHENOXY RESINS
- POLYAMIDES
- POLYCARBONATE RESINS
- POLYETHERS, Chlorinated
- POLYMETHYL METHACRYLATE
- POLYMETHYLENE
- POLYOLEFINS
- POLYOXYPROPYLENE
- POLYPROPYLENE
- POLYSTYRENE
- POLYTHENE
- POLYVINYL ALCOHOL
- POLYVINYLIDINE CHLORIDE
- VINYL POLYMERS
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- THERMOPLASTICS, Bearings.** See BEARINGS, Thermoplastics
- THERMOPLASTICS, Bottles.** See BOTTLES, Thermoplastics
- THERMOPLASTICS, Chemical engineering plant.** See CHEMICAL ENGINEERING, Plant, Thermoplastics
- THERMOPLASTICS, Coating, Paper.** See PAPER, Coating, Thermoplastics
- THERMOPLASTICS, Coatings.** See COATINGS, Thermoplastics
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- THERMOPLASTICS, Film, Packaging, Cheese.** See CHEESE, Packaging, Film, Thermoplastics
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- THERMOPLASTICS, Fittings, Lighting.** See LIGHTING, Fitting, Thermoplastics
- THERMOPLASTICS, Fixtures, Lapping, Cores, Transformers.** See TRANSFORMERS, Cores, Lapping, Fixtures, Thermoplastics
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HOLIDAY RESORTS, Town planning

HOTELS, Town planning

HOUSES, Town planning

HOUSING, Roads, Town planning

HOUSING, Town planning

LANDSCAPING, Town planning

NEW TOWNS

PARKS

PLAYGROUNDS

RECREATIONAL AREAS, Town planning

REFUSE, Collection, Town planning

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MOTOR CARS, Traffic engineering

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TRITOLYL PHOSPHATE. See TRICRESYL PHOSPHATE

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MOTOR CYCLES, Types, Triumph 5 TA Speed Twin TRIUMPH BONNEVILLE 120 MOTOR CYCLES. See MOTOR

CYCLES, Types, Triumph Bonneville 120 TRIUMPH CUB MOTOR CYCLES. See MOTOR CYCLES,

Types, Triumph Cub TRIUMPH MOTOR CYCLES. See MOTOR CYCLES, Types,

Triumph TRIUMPH TIGER CUB T20 MOTOR CYCLES. See MOTOR

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TROPICS, Air conditioning, Operating theatres, Hospitals. See HOSPITALS, Operating theatres, Air conditioning, Tropics

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INSPECTION, Sampling, Sequential, Truncation

TRUNK CALLS, Telephony. See TELEPHONY, Trunk calls

TRUNKING, Crossbar systems, Exchanges, Automatic, Telephony. See TELEPHONY, Automatic, Exchanges, Crossbar systems, Trunking

TRUNNION ASSEMBLIES, Radial sluice gates. See SLUICE

GATES, Radial, Trunnion assemblies

TRUNNION ASSEMBLIES, Vehicles, Astronautics. See

Astronautics, Vehicles, Trunnion assemblies

TRUSCON SYSTEM, Prefabricated maisonnettes. See

MAISONNETTES, Prefabricated, Truscon system

TRUSCON SYSTEM, Prefabrication, Flats. See FLATS, Prefabrication, Truscon system

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TSUEN WAN

See

TOWN PLANNING, Tsuen Wan

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TUBELESS TYRES, Earth moving equipment. See EARTH MOVING EQUIPMENT, Tyres, Tubeless

**TUBES**

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- TUFTED MAN-MADE FIBRES, Carpets.** See **CARPETS**, Man-made fibres, Tufted
- TUFTED MAN-MADE FIBRES, Fabrics.** See **FABRICS**, Man-made fibres, Tufted
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**TUNGSTEN, Thoriated, Electrodes, Argon shielded arc welding, Stainless steel, Sheets, Aircraft structures.** See **AIRCRAFT, Structures, Sheets, Steel, Stainless, Welding, Arc, Argon shielded, Electrodes, Tungsten, Thoriated**

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**TUNING, Aerials.** See **AERIALS, Tuning**

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**TUNING, Engines, Racing motor cycles.** See **MOTOR CYCLES (Racing) Engines, Tuning**

**TUNING, Transformers, Power supplies, Flyback, Line scanning, Receivers, Television.** See **TELEVISION, Receivers, Line scanning, Flyback, Power supplies, Transformers, Tuning**

**TUNING FORKS, Oscillators.** See **OSCILLATORS, Tuning fork**

**TUNING FORKS, Oscillators, Gyroscopes.** See **GYROSCOPES, Oscillators, Tuning fork**

**TUNISIA**

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**RAILWAYS, Tunisia**

**TUNNEL DIODE-TRANSISTOR LOGICAL ELEMENTS, Computers.** See **COMPUTERS, Logical elements, Transistor-Tunnel diode**

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**FREQUENCY, Dividers, Multivibrators, Tunnel diodes**

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DOCKS, Dry, Floating, Chester (Pennsylvania)  
ELECTRIC POWER SYSTEMS, Michigan  
ELECTRIC POWER SYSTEMS, U.S.A.  
ENGINEERING, Manpower, U.S.A.  
ENGINEERING, Technicians, Teachers, Training, U.S.A.  
FIRES, Prevention, U.S.A.  
FISHING, Industry, U.S.A.  
FLATS, Chicago  
FOOD, Freeze-drying, U.S.A.

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FOOD, Packaging, U.S.A.  
FOUNDRY PRACTICE, U.S.A.  
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HELICOPTERS, Transport, California  
HYDRAULIC MACHINERY, U.S.A.  
HYDROELECTRIC POWER, Yukon River  
HYDROELECTRIC POWER STATIONS, Tennessee Valley  
INDUSTRIAL DESIGN, Education, U.S.A.  
INDUSTRIAL DESIGN, U.S.A.  
INDUSTRIAL RESEARCH, U.S.A.  
LAKES, Water, Levels, Great Lakes  
LAW COURTS, Chicago  
LIGNITE, Mining, Opencast, Larson  
LOCOMOTIVES, Diesel-electric, U.S.A.  
LOCOMOTIVES, Diesel-hydraulic, U.S.A.  
LORRIES, Leasing, U.S.A.  
MAN-MADE FIBRES, Dyeing, U.S.A.  
METALS, Manufactures, Texas  
METALS, Mining, Nevada  
METALS, Mining, Texas  
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MOTOR CARS, Manufactures, U.S.A.  
MOTOR CARS, U.S.A.  
MOTORWAYS, Los Angeles  
NATURAL RESOURCES, U.S.A.  
NEW YORK. UNIVERSITY  
NUCLEAR ENERGY, U.S.A.  
NUCLEAR POWER STATIONS, U.S.A.  
NUCLEAR REACTORS, Fast, Lagoona Beach (Michigan)  
NUCLEAR REACTORS, Water moderated, U.S.A.  
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PATENTS, U.S.A.  
PENICILLIN, Manufactures, U.S.A.  
PETROLEUM, Industry, U.S.A.  
PLASTICS, Manufactures, U.S.A.  
PORTS, New York  
POWER STATIONS, Plant, U.S.A.  
POWER STATIONS, Tennessee Valley  
PRINTING, U.S.A.  
RADIOACTIVITY, Fall-out, U.S.A.  
ROADS, Construction, Equipment, U.S.A.  
ROADS, U.S.A.  
SCHOOLS, Prefabricated, U.S.A.  
SHIPBUILDING, U.S.A.  
SHRIMPS, Culture, U.S.A.  
SOUND, Recording, U.S.A.  
TECHNOLOGY, U.S.A.  
TELEPHONY, Services, U.S.A.  
TELESCOPES, Radio, Tyngsboro  
TENNESSEE VALLEY AUTHORITY  
THEATRES, Baltimore  
THEATRES, Minneapolis  
TIDAL POWER STATIONS, Passamaquoddy  
TOWN & COUNTRY PLANNING, U.S.A.  
TOWN PLANNING, U.S.A.  
WATER, Conservation, California  
WORLD TRADE CENTRE  
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**UNIVERSAL JOINTS**, Transmissions, Motor vehicles. See **MOTOR VEHICLES**, Transmissions, Joints, Universal

**UNIVERSITIES**, Aircraft engineering education. See **AIRCRAFT**, Engineering, Education, Universities

**UNIVERSITIES**, Architectural education. See **ARCHITECTURE**, Education, Universities

**UNIVERSITIES**, Chemical education. See **CHEMISTRY**, Education, Universities

**UNIVERSITIES**, Computer education. See **COMPUTERS**, Education, Universities

**UNIVERSITIES**, Electrical engineering. See **ELECTRICAL ENGINEERING**, Education, Universities

**UNIVERSITIES**, Electrical machinery education. See **ELECTRICAL MACHINERY**, Education, Universities

**UNIVERSITIES**, Engineering education. See **ENGINEERING**, Education, Universities

**UNIVERSITIES**, Engineering research. See **ENGINEERING**, Research, Universities

**UNIVERSITIES**, Fuel education. See **FUELS**, Education, Universities

**UNIVERSITIES**, Glass technology education. See **GLASS**, Manufactures, Education, Universities

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**UNIVERSITIES**, Traffic engineering education. See **TRAFFIC ENGINEERING**, Education, Universities

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V.L.F., Radio, Navigation systems, Aircraft. See AIRCRAFT, Navigation systems, Radio, V.L.F.

V.L.F., Radio links, Telegraphy. See TELEGRAPHY, Radio links, V.L.F.

V.L.F., Waveforms. See WAVEFORMS, V.L.F.

VACANCIES, Effect on ageing, Aluminium-Silver. See

ALUMINIUM-SILVER, Ageing, Effect of vacancies  
VACANCIES, Oxidising atmospheres, Quenching, Gold. See

GOLD, Quenching, Oxidising atmospheres, Vacancies

VACANCIES, Pitting, Surfaces, Single crystals, Aluminium. See ALUMINIUM, Crystals, Single, Surfaces, Pitting, Vacancies

VACANCIES, Quenched copper. See COPPER, Quenched, Vacancies

VACANCIES, Quenched gold. See GOLD, Quenched, Vacancies

VACANCIES, Quenched silver. See SILVER, Quenched, Vacancies

VACANCIES, Reducing atmospheres, Quenching, Gold. See GOLD, Quenching, Reducing atmospheres, Vacancies

VACUUM

Related Headings:

DEGASSING

IONISATION GAUGES

VACUUM, Annealing, Copper wires. See WIRES, Copper, Annealing, Vacuum

VACUUM, Annealing, Titanium. See TITANIUM, Annealing, Vacuum

VACUUM, Balances. See BALANCES, Vacuum

VACUUM, Brazing. See BRAZING, Vacuum

VACUUM, Casting. See CASTING, Vacuum

VACUUM, Casting, Steel. See STEEL, Casting, Vacuum

VACUUM, Casting, Steel alloys. See STEEL, Alloys, Casting, Vacuum

VACUUM, Chambers, Electron beam welding. See ELECTRON BEAM WELDING, Vacuum chambers

VACUUM, Chambers, Microscopy, High temperature creep studies, Copper. See COPPER, Creep, High temperature, Studies, Microscopy, Vacuum chambers

VACUUM, Chambers, Proton synchrotrons. See SYNCHROTRONS, Proton, Vacuum chambers

VACUUM, Chucks, Vertical-spindle grinding machines. See GRINDING, Machines, Vertical-spindle, Chucks, Vacuum

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VACUUM, Forming, Thermoplastics. See THERMOPLASTICS, Vacuum forming

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See FILMS, Beryllium-Copper, Sputtering, Vacuum, Ultra-high

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**VACUUM DEPOSITION**, Films, Microminiature amplifiers. See AMPLIFIERS, Microminiature, Films, Vacuum deposition

**VACUUM DEPOSITION**, Films, Microminiature circuits. See CIRCUITS, Electronics, Microminiature, Films, Vacuum deposition

**VACUUM DEPOSITION**, Films, Reflectors, Power supplies, Vehicles, Astronautics. See ASTRONAUTICS, Vehicles, Power supplies, Reflectors, Films, Vacuum deposition

**VACUUM DEPOSITION**, Gold, Films. See FILMS, Gold, Vacuum deposition

**VACUUM DEPOSITION**, Magnesium fluoride films. See FILMS, Magnesium fluoride, Vacuum deposition

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**VALVES, Water drain, Pneumatic machinery.** See **PNEUMATIC MACHINERY, Water drain valves**

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**VANADIUM, Corrosion, Heating equipment.** See **HEATING, Equipment, Corrosion, Vanadium**

**VANADIUM, Determination, Steel.** See **STEEL, Determination of vanadium**

**VANADIUM-ALUMINIUM-COBALT-TITANIUM.** See **ALUMINIUM-COBALT-TITANIUM-VANADIUM**

**VANADIUM CARBIDE, Precipitation, Embrittlement, Stress relieving, Steel-Chromium-Molybdenum-Vanadium, Steam plant, Power stations.** See **POWER STATIONS, Steam plant, Steel-Chromium-Molybdenum-Vanadium, Stress relieving, Embrittlement, Vanadium carbide precipitation**

**VANADIUM PENTOXIDE, Catalysts, Combustion, Oxygen-Gaseous fuels.** See **FUELS, Gaseous-Oxygen, Combustion, Catalysts, Vanadium pentoxide**

**VANADIUM PENTOXIDE, Effect on sintering, Magnesium ferrite.** See **MAGNESIUM FERRITE, Sintering, Effect of vanadium pentoxide**

**VANADIUM-STEEL.** See **STEEL-VANADIUM**

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**VANDEN PLAS PRINCESS 4-LITRE R CARS.** See **MOTOR CARS, Types, Vanden Plas Princess 4-litre R**

**VANDEN PLAS PRINCESS 1100 CARS.** See **MOTOR CARS, Types, Vanden Plas Princess 1100**

**VANE PUMPS.** See **PUMPS, Vane**

**VANE PUMPS, Emulsions, Petroleum-Water systems.** See **PETROLEUM-WATER SYSTEMS, Emulsions, Pumps, Vane**

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**VANS, Conversion to motor caravans.** See **MOTOR CARAVANS, Conversion from vans**

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**VANS, Transport, Food.** See **FOOD, Transport, Vans**

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Reflex, Cooling, Vapour

**VAPOUR, Film, Heat transfer. See HEAT, Transfer, Vapour film****VAPOUR, Penetration, Thermal insulating, Pipes. See**

PIPES, Insulation, Thermal, Penetration, Vapour

**VAPOUR, Penetration, Thermal insulating materials. See**

INSULATING MATERIALS, Thermal, Penetration, Vapour

**VAPOUR DEPOSITION, Crystals, Silicon. See SILICON, Crystals (Vapour deposition)****VAPOUR-LIQUID EQUILIBRIA, Azeotropes, Alkyl alcohols-**

Benzene. See ALKYL ALCOHOLS-BENZENE, Azeotropes, Vapour-liquid equilibria

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Differential equations, Variational integrals

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**VARIATIONS FLOW ANALYSIS, Tensile strength, Aluminium**

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**VAUXHALL CRESTA PA SERIES CARS. See MOTOR**

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**VAUXHALL VICTOR DE LUXE ESTATE CARS. See**

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**VAUXHALL VIVA DE LUXE CARS. See MOTOR CARS,**

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DINGS, Prefabricated, Veb Bama system

**VECTORS, Analysis, Circuits, A.C. See A.C., Circuits,**

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**VECTORS, Analysis, Modal shapes determination, Resonance**

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**VECTORS, Analysis, Steady state vibrations, Mass-Spring**

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tion motors. See ELECTRIC MOTORS, Induction, Single phase, Theory, Double rotating field, Vector diagrams

**VEGETABLE OILS. See OILS, Vegetable****VEGETABLE TANNING. See TANNING, Vegetable**



**VEGETABLES**

## Related Headings:

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CAULIFLOWERS  
CUCUMBERS  
MUSHROOMS  
ONIONS  
PEAS  
POTATOES  
RHUBARB

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BICYCLES  
CARAVANS  
FIRE ENGINES  
HOVERCRAFT  
MOTOR CARAVANS  
MOTOR CARS  
MOTOR CYCLES  
MOTOR VEHICLES  
SHIPS  
TOBOGGANS  
TRAILERS  
TROLLEYS

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LORRIES  
MOTOR COACHES  
MOTOR VEHICLES, Articulated  
SHOPS, Retail, Mobile  
TRACTORS  
VANS

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- VEHICLES, Commercial, Transport, Petroleum products.** See PETROLEUM, Products, Transport, Commercial vehicles
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VITREOUS ENAMELLING, Iron castings. See IRON, Castings, Enamelling, Vitreous

VITREOUS ENAMELS. See ENAMELS, Vitreous

VITREOUS ENAMELS, Coating, Signs. See SIGNS, Coating, Vitreous enamels

VITREOUS SILICA. See SILICA, Fused

VITRIFICATION, Clays, Pottery. See POTTERY, Clays, Vitrification

VITRINITE, Macerals, Bituminous coal. See COAL, Bituminous, Macerals, Vitrinite

VOCABULARY, Engineering education. See ENGINEERING, Education, Vocabulary tests

VOCATIONAL GUIDANCE, Engineering. See ENGINEERING, Vocational guidance

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VOICE FREQUENCY, Telegraphy. See TELEGRAPHY, Voice frequency

VOLATILE BASES, Ryegrass, Silage. See SILAGE, Ryegrass, Bases, Volatile

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VOLKSWAGEN 1200 CARS. See MOTOR CARS, Types, Volkswagen 1200

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#### VOLTAGE

Related Headings:  
FREQUENCY-VOLTAGE CONVERTERS  
HIGH VOLTAGES  
OVERVOLTAGES

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- See TRANSMISSION LINES, Voltage standing wave ratio

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**VOLUMETRIC FILLING, Packaging, Butter. See BUTTER, Packaging, Filling, Volumetric**

**VOLUMETRIC RADAR, Traffic control, Air transport. See AIR TRANSPORT, Traffic control, Radar, Volumetric****VOLUTES, Centrifugal pumps. See PUMPS, Centrifugal, Volutes****VOLVO CARS. See MOTOR CARS, Types, Volvo****VOODOO FIGHTER AIRCRAFT. See FIGHTER AIRCRAFT, Types, McDonnell CF-101B Voodoo****VORTEX STREETS, Wakes, Blunt trailing edges, Aerofoils. See AEROFOILS, Edges, Trailing, Blunt, Wakes, Vortex streets****VORTEX TUBE SAND TRAPS, Waterways. See WATERWAYS, Sand traps, Vortex tube****VORTEX TUBES, Evaporators, Refrigerators. See REFRIGERATORS, Evaporators, Vortex tubes****VORTICES, Auger grain elevators. See GRAIN, Elevators, Auger, Vortices****VORTICES, Delta wings, Aircraft. See AIRCRAFT, Wings, Delta, Vortices****VORTICES, Outlet flow, Steel, Open circular tanks, Water. See WATER, Tanks, Circular, Open, Steel, Outlet flow, Vortices****VORTICITY, Superfluidity, Liquid helium. See HELIUM, Liquid, Superfluidity, Vorticity****VULCANISATION, Ethylene—propylene rubber. See ETHYLENE—PROPYLENE, Rubber, Vulcanisation****VULCANISATION, Rubber. See RUBBER, Vulcanisation****VULCANISATION, Rubber, Sheathing, Electric cables. See CABLES, Electric, Sheathing, Rubber, Vulcanisation****VULCANISATION, Rubber, Soles, Shoes. See SHOES, Soles, Rubber, Vulcanisation****VULCANISED JOINTS, Belts, Conveyors, Coal mining. See COAL, Mining, Conveyors, Belts, Joints, Vulcanised****VYSOKOGORSK**

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- See
- MARKETS, Buildings, Wakefield
- WATER, Engineering, Wakefield

**WAKES, Blunt trailing edges, Aerofoils. See AEROFOILS, Edges, Trailing, Blunt, Wakes****WALES**

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- COAL, Mining, South Wales
- DAMS, Reservoirs, Clywedog
- GAS (Town) Wales
- HOUSING, Caerphilly
- HYDROELECTRIC POWER STATIONS, Pumped storage, Ffestiniog
- HYDROELECTRIC POWER STATIONS, Rheidol
- LIBRARIES, County, Montgomeryshire
- MOTOR COACHES, Operation, South Wales
- NUCLEAR POWER STATIONS, Wylfa
- PETROLEUM, Refineries, Pembroke
- PORTS, Cardiff
- RAILWAYS, Ffestiniog
- RAILWAYS, Wales
- ROADS, Haulage, Wales
- ROADS, Penally
- ROADS, South Wales
- SHOPPING CENTRES, Bangor
- TOWN PLANNING, Connah's Quay
- VIADUCTS, Cowbridge
- VILLAGE PLANNING, Reynoldston
- WATER, Engineering, Denbighshire
- WATER, Engineering, Llandegfedd
- WOOL, Industry, Wales

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- TOWN PLANNING, Walkden

**WALKING DRAGLINE EXCAVATORS. See EXCAVATORS, Dragline, Walking****WALKING DRAGLINE EXCAVATORS, Opencast mining, Ironstone. See IRONSTONE, Mining, Opencast, Excavators, Dragline, Walking****WALL TELEPHONES. See TELEPHONES, Wall****WALLASEY**

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#### WALTHAMSTOW

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#### WALVIS BAY

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#### WANDSWORTH

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WAREHOUSES, Storage, Drugs. See DRUGS, Warehouses

WAREHOUSES, Storage, Food. See FOOD, Storage, Warehouses

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WARM AIR, Gas heating, Flats. See FLATS, Heating, Gas, Warm air

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WARM AIR, Thermal storage heating, Buildings. See BUILDINGS, Heating, Thermal storage, Warm air

WARP KNIT CARPETS. See CARPETS, Warp-knit

WARP KNIT FABRICS. See FABRICS, Warp knit

WARP KNIT FABRICS, Suitings. See SUITINGS, Fabrics, Warp knit

WARP KNIT MAN-MADE FIBRES, Fabrics. See FABRICS, Man-made fibres, Warp-knit

WARP KNIT NYLON FABRICS. See FABRICS, Nylon, Warp knit

WARP KNIT NYLON 6 FABRICS. See FABRICS, Nylon 6, Warp knit

WARP KNITTING. See KNITTING, Warp

WARP KNITTING, Elastic fabrics, Outerwear. See OUTERWEAR, Fabrics, Elastic, Knitting, Warp

WARP KNITTING, Nylon 6, Bed sheets. See BED SHEETS, Nylon 6, Knitting, Warp

WARPING, Yarns. See YARNS, Warping

WARPS, Trawl, Winches, Trawlers. See TRAWLERS, Winches,

Trawl warps

WARRAGAMBA

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DAMS, Warragamba

WARREN TRUSSES. See TRUSSES, Warren

WARSHIPS

Related Headings:

ANTI-SUBMARINE

BOATS, Motor, Naval

CORVETTES

DESTROYERS

FRIGATES

SUBMARINES

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WASHING, Motor vehicles, Service stations. See MOTOR

VEHICLES, Service stations, Vehicle washing sections

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DETERGENTS

WASHINGTON STATE

See

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WASTE

Related Headings:

REFUSE



- WASTE, Bricks manufacture. See BRICKS, Manufactures, Waste
- WASTE, Chromium oxidation, Cyanides, Effluents, Finishing, Metals. See METALS, Finishing, Effluents, Cyanides, Oxidation, Chromium waste
- WASTE, Cyanides, Electroplating. See ELECTROPLATING, Wastes, Cyanide
- WASTE, Drying, Bricks manufactures. See BRICKS, Manufactures, Drying, Waste
- WASTE, Kilns, Bricks. See BRICKS, Kilns, Waste
- WASTE, Leaching, Uranium ores. See URANIUM, Ores, Leaching, Wastes
- WASTE, Metal manufacture. See METALS, Manufactures, Wastes
- WASTE, Paper. See PAPER, Waste
- WASTE, Paper, Balers. See BALERS, Waste paper
- WASTE, Pile insertion, Axminster carpets. See CARPETS, Axminster, Pile insertion, Waste
- WASTE, Spinning, Woollen yarns. See YARNS, Woollen, Spinning, Waste
- WASTE, Spinning, Worsted yarns. See YARNS, Worsted, Spinning, Waste
- WASTE, Water. See WATER, Waste
- WASTE, Wood. See WOOD, Waste
- WASTE, Wood, Firing, Boilers, Wood furniture manufactures. See FURNITURE, Wood, Manufactures, Boilers, Wood waste fired
- WASTE, Wool manufactures. See WOOL, Manufactures, Waste
- WASTE, Wool scouring, Effect on sewage treatment. See SEWAGE, Treatment, Effect of wool scouring wastes
- WASTE HEAT, District heating. See DISTRICT HEATING, Waste heat
- WASTE HEAT, Utilisation, Air conditioning. See AIR CONDITIONING, Waste heat utilisation
- WASTE HEAT, Utilisation, Air conditioning, Office buildings. See OFFICE BUILDINGS, Air conditioning, Waste heat utilisation
- WASTE HEAT RECOVERY, Furnaces, Melting, Glass. See GLASS, Melting, Furnaces, Waste heat recovery
- WASTE HEAT RECOVERY, Steam plant, Steel production. See STEEL, Production, Steam plant, Waste heat recovery
- WASTE HEAT RECOVERY, Tankers, Ships. See TANKERS, Ships, Waste heat recovery
- WASTE HEAT RECOVERY, Vapours, Solvents, Ovens, Stoving, Paint. See PAINT, Stoving, Ovens, Solvents, Vapours, Waste heat recovery
- WASTE PRODUCTS
- Related Headings:
- SCRAP
- WASTE PRODUCTS, Butadiene rubber, Corrosion inhibitors. See CORROSION, Inhibitors, Butadiene rubber, Waste products
- WASTE PRODUCTS, Nuclear reactors. See NUCLEAR REACTORS, Wastes
- WASTE RECOVERY, Sulphuric acid, Pickling, Stainless steel. See STEEL, Stainless, Pickling, Sulphuric acid, Waste recovery

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## WATER

### Related Headings:

AQUEOUS  
CONDENSATE  
FEEDWATER  
GROUND WATER  
HYDROLOGY  
ICE  
MOISTURE  
STEAM  
STORM WATER

## WATER-SUBHEADINGS-Synopsis

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

### Research

#### Physical properties

##### Motion

##### Waves

##### Flow

##### Cavitation

##### Jets

##### Destratification

#### Chemical properties

##### Corrosion

##### Constituents

##### Suspended solids

#### Technical activities

##### Sampling

##### Analysis

##### Determination of...

##### Engineering

## WATER—SUBHEADINGS—Synopsis—cont.

- Pumping
  - Pumps
- Softening
- Purification
  - Filtration
  - Coagulation
  - Distillation
  - Evaporation
  - Evaporators
  - Extraction
  - Reclamation
  - Distribution
    - Pipes
    - Mains
    - Pipelines
    - Tunnels
  - Storage
    - Tanks
    - Towers
- Mixing
- Pollution
- Use
  - Resources
    - Wells
    - Catchment areas
  - Supplies
  - Conservation
  - Waste
  - Equipment
    - Fittings
  - Particular uses
    - Power generation
      - Turbines
    - Heating
      - Heaters
    - Landscaping features
- Kinds of water by property or use
  - Hot
    - Boiling
    - Supercooled
  - Radioactive
  - Drinking
  - Industrial
  - Saline

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**WATER, Catchment areas, Land use**

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WATER, Cooling, Heat exchangers. See HEAT, Exchangers, Water cooled

WATER, Cooling, Test-stands, Engines, Boosters, Astro-nautic vehicles. See ASTRONAUTICS, Vehicles, Boosters, Engines, Test-stands, Cooling, Water

WATER, Cooling, Welding guns, Motor car parts. See MOTOR CARS, Parts, Welding, Guns, Cooling, Water

WATER, Cooling systems. See COOLING SYSTEMS, Water

WATER, Cooling systems, Power stations. See POWER STATIONS, Cooling systems, Water

WATER, Cooling systems, Town gas production. See GAS (Town) Production, Cooling systems, Water

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**WATER, Determination of carbon dioxide**

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AQUIFERS, Recharging  
CATCHMENT AREAS  
RESERVOIRS  
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Pivoted disc  
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WEIGHING, Canned rice puddings. See RICE PUDDINGS, Canned, Weighing

WEIGHING, Cement. See CEMENT, Weighing

WEIGHING, Coal. See COAL, Weighing

WEIGHING, Food. See FOOD, Weighing

WEIGHING, Mixing, Animal feedingstuffs. See ANIMAL FEEDINGSTUFFS, Mixing, Weighing

WEIGHING, Paper. See PAPER, Weighing

WEIGHING, Steel, Blooms. See BLOOMS, Steel, Weighing

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LOADS, Measurement

WEIGHING MACHINES, Control systems, Rectifiers, Silicon controlled

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**WEIGHTING ARMS, Spinning, Cotton, Yarns. See YARNS,**

Cotton, Spinning, Weighting arms

**WEIGHTLESSNESS, Manned flights, Astronautics. See**

ASTRONAUTICS, Flights, Manned, Weightlessness

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Effluents, Pipelines, Aluminium, Welded

**WELDED ALUMINIUM, River crossings, Pipelines. See PIPE-**

LINES, River crossings, Aluminium, Welded

**WELDED ALUMINIUM ALLOYS. See ALUMINIUM, Alloys,**

Welded

**WELDED ALUMINIUM ALLOYS, Structures. See STRUC-**

TURES, Aluminium alloys, Welded

**WELDED ALUMINIUM-MAGNESIUM-MANGANESE. See**

ALUMINIUM-MAGNESIUM-MANGANESE, Welded

**WELDED ALUMINIUM-MAGNESIUM-ZINC. See ALUMINIUM-**

MAGNESIUM-ZINC, Welded

**WELDED AUSTENITIC STEEL. See STEEL, Austenitic,**

Welded

**WELDED BOX BEAMS, Base units, Motor cars. See MOTOR**

CARS, Base units, Beams, Box, Welded

**WELDED CONNECTIONS, Stiffeners, Plated grillages, War-**

ships. See WARSHIPS, Grillages, Plated, Stiffeners,

Connections, Welded

**WELDED COPPER ALLOYS. See COPPER, Alloys, Welded****WELDED FERRITIC STEEL. See STEEL, Ferritic, Welded****WELDED GIRDERS, Cranes. See CRANES, Girders, Welded****WELDED METAL PIPES. See PIPES, Metal, Welded****WELDED PRESSURE VESSELS. See PRESSURE**

VESSELS, Welded

**WELDED RAILS, Open sections, Underground railways. See**

RAILWAYS, Underground, Open sections, Rails, Welded

**WELDED RAILS, Permanent way. See PERMANENT WAY,**

Rails, Welded

**WELDED STEEL. See STEEL, Welded****WELDED STEEL, Frames, Houses. See HOUSES, Frames,**

Steel, Welded

**WELDED STEEL, Girders, Buildings. See BUILDINGS,**

Girders, Steel, Welded

**WELDED STEEL, Structures. See STRUCTURES, Steel,**

Welded

**WELDED STEEL, Tubes, Structures. See STRUCTURES,**

Tubes, Steel, Welded

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**WELDING**

Related Headings:

ELECTRON BEAM WELDING

LASERS, Welding

**WELDING—SUBHEADINGS—Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

Particular localities

*Russia*

*Education*

*Research*

*Symbols*

Problems

*Industrial health*

*Equipment*

*Heads*

*Accessories*

*Technical activities*

*Inspection*

Kinds of welding

*By heat source*

*Electric*

*Arc*

## WELDING—SUBHEADINGS—Synopsis—cont.

Kinds of welding—cont.

Stud

Electroslag

Resistance

Spot

Friction

Pressure

## WELDING, Accessories

Tools for the job. Welder, 32 (Oct/Dec 63) p.73

WELDING, Aluminium. See ALUMINIUM, Welding

WELDING, Aluminium alloys. See ALUMINIUM, Alloys, Welding

WELDING, Aluminium alloys, Boats. See BOATS, Aluminium alloys, Welding

WELDING, Aluminium alloys, Tanks, Road tankers. See TANKERS, Road, Tanks, Aluminium alloys, Welding

WELDING, Aluminium vessels, Cryogenics. See CRYOGENICS, Vessels, Aluminium, Welding

WELDING, Arc, Aluminium, Tanks, Natural gas carrying tankers. See TANKERS, Ships, Natural gas carrying, Tanks, Aluminium, Welding, Arc

WELDING, Arc, Aluminium, Tanks, Storage, Natural gas. See GAS, Natural, Storage, Tanks, Aluminium, Welding, Arc

WELDING, Arc, Aluminium—Bronze. See ALUMINIUM—BRONZE, Welding, Arc

## WELDING, Arc, Arc stability, Effect of generators, D.C.

Influence of d.c. generators and welding transformers on arc stability and electrode burn-off rate. M. Bertung. Brit. Welding J., 11 (Apr 64) p.172-82. il.

## WELDING, Arc, Arc stability, Effect of transformers

Influence of d.c. generators and welding transformers on arc stability and electrode burn-off rate. M. Bertung. Brit. Welding J., 11 (Apr 64) p.172-82. il.

WELDING, Arc, Austenitic stainless steel, Pipes, Chemical engineering plant. See CHEMICAL ENGINEERING, Plant, Pipes, Steel, Stainless, Austenitic, Welding, Arc

WELDING, Arc, Austenitic steel, Steam plant, Power stations. See POWER STATIONS, Steam plant, Steel, Austenitic, Welding, Arc

WELDING, Arc, Buckstays, Ovens, Coke. See COKE, Ovens, Buckstays, Welding, Arc

## WELDING, Arc, Carbon dioxide shielded

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WELDING, Arc, Castings repair, Non-ferrous metals. See NON-FERROUS METALS, Castings, Repairs, Welding, Arc

WELDING, Arc, Chassis, Battery operated locomotives. See LOCOMOTIVES, Battery operated, Chassis, Welding, Arc

WELDING, Arc, Chassis, Battery operated trucks. See TRUCKS, Battery operated, Chassis, Welding, Arc

WELDING, Arc, Combustion chambers, Missiles. See MISSILES, Combustion chambers, Welding, Arc

WELDING, Arc, Commercial vehicle parts. See VEHICLES, Commercial, Parts, Welding, Arc

## WELDING, Arc, Constricted, Plug, Carbon dioxide shielded

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## WELDING, Arc, D.C., Transformers

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## WELDING, Arc, Electrodes

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## WELDING, Arc, Electrodes, Consumption, Calculations

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WELDING, Arc, End caps, Cans, Fuel elements, Magnox reactors. See NUCLEAR REACTORS, Magnox, Fuel elements, Cans, End caps, Welding, Arc

WELDING, Arc, End seals, Cans, Fuel elements, Nuclear reactors. See NUCLEAR REACTORS, Fuel elements, Cans, End seals, Welding, Arc

## WELDING, Arc, Equipment

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## WELDING, Arc, Fine wire, Frequency meters

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WELDING, Arc, Injection moulding machines, Thermoplastics. See THERMOPLASTICS, Moulding, Injection, Machines, Welding, Arc

WELDING, Arc, Metal sheets. See SHEETS, Metals, Welding, Arc

WELDING, Arc, Mild steel. See STEEL, Mild, Welding, Arc

WELDING, Arc, Mild steel plates. See PLATES, Steel, Mild, Welding, Arc

WELDING, Arc, Nickel. See NICKEL, Welding, Arc

WELDING, Arc, Nickel alloys. See NICKEL, Alloys, Welding, Arc

WELDING, Arc, Nickel-Chromium-Cobalt-Molybdenum, Trunnion assemblies, Vehicles, Astronautics. See ASTRONAUTICS, Vehicles, Trunnion assemblies, Nickel-Chromium-Cobalt-Molybdenum, Welding, Arc

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## WELDING, Arc, Plug, Carbon dioxide shielded, Backing bars, Copper

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WELDING, Arc, Press tool maintenance. See PRESS TOOLS, Maintenance, Welding, Arc

WELDING, Arc, Shipbuilding. See SHIPBUILDING, Welding, Arc

WELDING, Arc, Stainless steel, Plates. See PLATES, Steel, Stainless, Welding, Arc

WELDING, Arc, Stainless steel, Sheets, Aircraft structures. See AIRCRAFT, Structures, Sheets, Steel, Stainless, Welding, Arc

WELDING, Arc, Steel. See STEEL, Welding, Arc

WELDING, Arc, Steel, Barges, Coal. See COAL, Barges, Steel, Welding, Arc

WELDING, Arc, Steel, Gas-holders. See GAS-HOLDERS, Steel, Welding, Arc

WELDING, Arc, Steel, Plates, Armoured personnel carriers. See PERSONNEL CARRIERS, Armoured, Plates, Steel, Welding, Arc



- WELDING, Arc, Steel alloys. See STEEL, Alloys, Welding, Arc
- WELDING, Arc, Steel-Nickel. See STEEL-NICKEL, Welding, Arc
- WELDING, Arc, Steel-Nickel, Cryogenics equipment. See CRYOGENICS, Equipment, Steel-Nickel, Welding, Arc
- WELDING, Arc, Valve installation, Purge gas, Fuel elements, Helium cooled nuclear reactors. See NUCLEAR REACTORS, Helium cooled, Fuel elements, Purge gas, Valves, Installation, Welding, Arc
- WELDING, Arc, Voltage stabilisers, Transistor  
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- WELDING, Bodies, Motor cars. See MOTOR CARS, Bodies, Welding
- WELDING, Butt, Mild steel plates. See PLATES, Steel, Mild, Welding, Butt
- WELDING, Butt, Steel panels, Ships. See SHIPS, Panels, Steel, Welding, Butt
- WELDING, Cabinets, Refrigerators. See REFRIGERATORS, Cabinets, Welding
- WELDING, Castings, Steel. See STEEL, Castings, Welding
- WELDING, Condensers, Refrigerators. See REFRIGERATORS, Condensers, Welding
- WELDING, Cryogenics, Steel. See STEEL, Cryogenics, Welding
- WELDING, Cryogenics equipment. See CRYOGENICS, Equipment, Welding
- WELDING, Education  
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- WELDING, Education, Universities  
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- WELDING, Effect on ageing, Aluminium-Magnesium-Zinc. See ALUMINIUM-MAGNESIUM-ZINC, Ageing, Effect of welding
- WELDING, Electroslag  
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- WELDING, Electroslag, Circumferential  
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- WELDING, Electroslag, Cylinders, Hydraulic presses, Forging. See FORGING, Presses, Hydraulic, Cylinders, Welding, Electroslag
- WELDING, Electroslag, Mild steel, Frames, Leather presses. See LEATHER, Presses, Frames, Steel, Mild, Welding, Electroslag
- WELDING, Electroslag, Steel, Plates. See PLATES, Steel, Welding, Electroslag
- WELDING, Electroslag, Submarine bulkheads. See SUBMARINES, Bulkheads, Welding, Electroslag
- WELDING, Excavator manufactures. See EXCAVATORS, Manufactures, Welding
- WELDING, Frames, Tractor shovels. See TRACTOR SHOVELS, Frames, Welding
- WELDING, Friction, Aluminium alloys. See ALUMINIUM, Alloys, Welding, Friction
- WELDING, Friction, Machines  
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Friction welding development [Blacks' Friction Welders Co.] *Welding & Metal Fabrication*, 32 (Aug 64) p.298-300. il.
- WELDING, H.F., Thermoplastics. See THERMOPLASTICS, Welding, H. F.
- WELDING, Heads, Reciprocating  
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- WELDING, Helical, Steel, Cases, Engines, Rockets. See ROCKETS, Engines, Cases, Steel, Welding, Helical
- WELDING, High temperature steel. See STEEL, High temperature, Welding
- WELDING, High tensile steel. See STEEL, High tensile, Welding
- WELDING, Housings, Rear axles, Motor cars. See MOTOR CARS, Rear axles, Housings, Welding
- WELDING, Hydraulic pit-prop manufactures. See PIT-PROPS, Hydraulic, Manufacture, Welding
- WELDING, Industrial health  
Health hazards of welding practice. *Metal Industry*, 104 (2 Jan 64) p.14-15
- WELDING, Inspection, Ultrasonics, Simulators  
Simulator of ultrasonic flaw detection. *Ultrasonics*, 2 (Apr/Jun 64) p.92-3. il.
- WELDING, Low alloy steel, Plates, Ships. See SHIPS, Plates, Steel, Low alloy, Welding
- WELDING, Maintenance, Agricultural equipment. See AGRICULTURAL EQUIPMENT, Maintenance, Welding
- WELDING, Maintenance, Cast iron agricultural equipment. See AGRICULTURAL EQUIPMENT, Iron, Cast, Maintenance, Welding
- WELDING, Metals for. See METALS (Welding)
- WELDING, Microminiature circuits. See CIRCUITS, Electronics, Microminiature, Welding
- WELDING, Motor car parts. See MOTOR CARS, Parts, Welding
- WELDING, Nickel silver. See NICKEL SILVER, Welding
- WELDING, Nodular iron. See IRON, Nodular, Welding
- WELDING, Nuclear power stations plant. See NUCLEAR POWER STATIONS, Plant, Manufactures, Welding
- WELDING, Painted steel. See STEEL, Painted, Welding
- WELDING, Pipelines, Petroleum. See PETROLEUM, Pipelines, Welding
- WELDING, Power station plant. See POWER STATIONS, Plant, Welding
- WELDING, Pressure  
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- WELDING, Pressure, Small tool  
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- WELDING, Projection, Metal, Sections. See SECTIONS, Metal, Welding, Projection
- WELDING, Projection, Metal sheets. See SHEETS, Metals, Welding, Projection
- WELDING, Projection, Mild steel sheets. See SHEETS, Steel, Mild, Welding, Projection
- WELDING, Projection, Steel, Sheets. See SHEETS, Steel, Welding, Projection
- WELDING, Refractory metals. See METALS, Refractory, Welding
- WELDING, Research  
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**WELDING, Research, Great Britain**

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**WELDING, Resistance, Control systems**

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WELDING, Resistance, Crossed wires. See WIRES, Crossed, Welding, Resistance

**WELDING, Resistance, Data recording**

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**WELDING, Resistance, Polyphase, Transformers**

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WELDING, Seam, Metals, Sheets. See SHEETS, Metals, Welding, Seam

WELDING, Seam, Nimonic alloys. See NIMONIC ALLOYS, Welding, Seam

WELDING, Ship repairs. See SHIPS, Repairs, Welding

WELDING, Shipbuilding. See SHIPBUILDING, Welding

WELDING, Spin, Plastics. See PLASTICS, Welding, Spin

**WELDING, Spot**

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WELDING, Spot, Nimonic 90. See NIMONIC 90, Welding, Spot

WELDING, Spot, Titanium alloys, Sheets. See SHEETS, Titanium alloys, Welding, Spot

WELDING, Stainless steel. See STEEL, Stainless, Welding

WELDING, Stainless steel elements, Filters, Hydraulic systems, Aircraft. See AIRCRAFT, Hydraulic systems, Filters, Elements, Wires, Steel, Stainless, Welding

WELDING, Steel, Flyovers. See FLYOVERS, Steel, Welding

WELDING, Steel, Frames, Blades, Bulldozers. See BULLDOZERS, Blades, Frames, Steel, Welding

WELDING, Steel, Pipes. See PIPES, Steel, Welding

WELDING, Steel, Plates. See PLATES, Steel, Welded

WELDING, Steel, Plates, Memorials, Arches. See ARCHES, Memorials, Plates, Steel, Welding

WELDING, Steel, Structures. See STRUCTURES, Steel, Welding

WELDING, Steel, Tubes, Structures. See STRUCTURES, Tubes, Steel, Welding

WELDING, Steel alloys, Strips, Tubes. See TUBES, Strips, Steel alloys, Welding

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**WELDING, Stud**

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Possible types of flow at swept leading edges. A. Stanbrook & L. C. Squire. *Aeronautical Q.*, 15 (Feb 64) p.72-82. il. refs.

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**WINGS, Short take-off aircraft. See AIRCRAFT, Short take-off, Wings****WINGS, Supersonic aircraft. See AIRCRAFT, Supersonic, Wings****WINGS, Vertical take-off aircraft. See AIRCRAFT, Vertical take-off, Wings****WINTER, Building. See BUILDING, Winter****WINTER, Concrete construction, Bridges. See BRIDGES, Concrete construction, Winter conditions****WINTER, Concreting. See CONCRETING, Winter****WINTER, Driving, Motor cars. See MOTOR CARS, Driving, Winter****WINTER, Formwork removal, Concrete slabs, Floors. See FLOORS, Slabs, Concrete, Formwork, Removal, Winter****WINTER, Maintenance, Roads. See ROADS, Maintenance, Winter****WINTER, Navigation, Ships. See SHIPS, Navigation, Winter****WINTER, Petroleum distribution. See PETROLEUM, Distribution, Winter****WINTER, Petroleum products distribution. See PETROLEUM, Products, Distribution, Winter****WINTER, Sports. See SPORTS, Winter****WINTER, Town gas distribution. See GAS (Town) Distribution, Winter****WINTER, Viscosity, Lubricating oils, Engines, Motor vehicles. See MOTOR VEHICLES, Engines, Lubricating oils, Viscosity, Winter conditions****WIRE FENCES, Farms. See FARMS, Fences, Wire****WIRE GAUZE, Filters, Ships. See SHIPS, Filters, Gauze, Wire****WIRE-GRIDS, Cylindrical, Nuclear instruments. See**

COUNTERS, Nuclear instruments, Grids, Wire, Cylindrical

**WIRE LINE CORE DRILLING, Prospecting, Tin. See TIN, Prospecting, Drilling, Core, Wire line****WIRE MESH, Stowing, Coal mining. See COAL, Mining, Stowing, Wire mesh****WIRE ROPES. See ROPES, Wire****WIRE ROPES, Hoisting equipment. See HOISTING EQUIPMENT, Ropes, Wire****WIRE ROPES, Winding, Mining. See MINING, Winding, Ropes, Wire****WIRE-STITCHING, Periodicals. See PERIODICALS, Wire-stitching****WIRE-STITCHING MACHINES**

Wire-stitching machines—now available in the U.K. [Acme Steel] *Packaging*, 35 (Jan 64) p.86-9. il.

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Aluminium in wire products. *Aluminium Courier* (Mar 64) p.12-16. il.

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Properties of aluminium wire produced by the Properzi method. D. Hrivnakova & J. Vrbenska. *Metal Treatment*, 31 (May 64) p.172-6. il. refs.

**WIRES, Belts, Conveyors. See CONVEYORS, Belts, Wire****WIRES, Coating, Plastics**

Plastic coatings for the protection of wire and wire products. P. W. Sherwood. *Corrosion Prevention & Control*, 11 (Jun 64) p.30-2

**WIRES, Coils. See COILS, Wires****WIRES, Copper, Annealing, Vacuum**

Better copper wire by vacuum annealing. *Engineering*, 197 (31 Jan 64) p.201. il.

New Efco furnace at the Enfield Rolling Mills. *Machinery*, 104 (29 Jan 64) p.239-41. il.

Vacuum annealing copper wire: elevated bell-furnace installation produces over 100 tons each week. *Metal Industry*, 104 (23 Jan 64) p.116-17. il.

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Vacuum annealing of copper wire. *Metalworking Production*, 108 (26 Feb 64) p.75-7. il.

Vacuum annealing of copper wire. *Wire Industry*, 31 (Feb 64) p.175+. il.

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Highly automated copper rod mill [Northern Electric Co. Ltd. in Canada] *Wire Industry*, 31 (Mar 64) p.283-5. il.

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Hot tinning of copper wire. *Wire Industry*, 31 (Mar 64) p.273+. il.

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**WIRES, Cords, Reinforced rubber. See RUBBER, Reinforced, Cords, Wires****WIRES, Crimping**

New developments in crimping. *Machinery Lloyd (European ed.)* 36 (Sep 64) p.55-7. il.

New developments in crimping [Plessey Unicrimp tools] *Machinery Lloyd (Overseas ed.)* 36 (29 Aug 64) p.18-20. il.

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Productivity in multiple cross-wire welding. R. H. Jordan. *Welding & Metal Fabrication*, 32 (Jan 64) p.19-26. il.

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Reclamation system for emulsions used in wire drawing machinery. A. El-Hindi. *Wire Industry*, 31 (Sep 64) p.886-90. il.

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Catalytic fume elimination. *Wire Industry*, 31 (May 64) p.485-7. il.

**WIRES, Enamelling, Ovens**

Controlled convection wire enamelling oven. *Wire Industry*, 31 (Sep 64) p.897+. il.

**WIRES, Fences. See FENCES, Wire****WIRES, Forming, Machines**

MASA wire & strip forming equipment. *Wire Industry*, 31 (Apr 64) p.388-9

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- WIRES, Insulated, Coiling, Electric motors, A.C., Speed changers**  
Variable speed drives in the insulated wire industry, pt.2 [Heenan & Dynamic] E. McGee. *Wire Industry*, 31 (Jan 64) p.71+. il.
- WIRES, Insulated, Extrusion, Control systems, Capacitance monitors**  
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- WIRES, Iron, Yield point, Effect of hydrostatic pressure**  
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- WIRES, Manufactures, Control systems**  
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- WIRES, Manufactures, Education**  
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- WIRES, Manufactures, Effluents, Treatment**  
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- WIRES, Manufactures, Mechanical handling equipment**  
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- WIRES, Manufactures, Russia**  
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- WIRES, Mesh. See MESH, Wires**
- WIRES, Mesh, Reinforced concrete. See CONCRETE, Reinforced, Mesh, Wire**
- WIRES, Nickel alloys, Manufactures**  
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- WIRES, Niobium-Tantalum, Superconducting, Critical current**  
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- WIRES, Niobium-Tin, Superconducting**  
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- WIRES, Niobium-Zirconium, Superconducting, Critical current, Degradation**  
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- WIRES, Plastics, Papermaking machines. See PAPERMAKING, Machines, Wires, Plastics**
- WIRES, Platinum, Boiling studies. See BOILING, Studies, Wires, Platinum**
- WIRES, Platinum, Cooling, Hydrogen**  
Change of platinum resistance by hydrogen. R. J. Galagali. *Brit. J. of Applied Physics*, 15 (Feb 64) p.208-9. il. refs.
- WIRES, Reinforced aluminium alloy, Sheets. See SHEETS, Aluminium alloy, Reinforced-Wires**
- WIRES, Reinforced metals. See METALS, Reinforced-Wires**
- WIRES, Shaped sections, Forming, Cold**  
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- WIRES, Silver, Resistivity, Effect of plastic torsion**  
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- WIRES, Steel, Aircraft components. See AIRCRAFT, Components, Wires, Steel**
- WIRES, Steel, Ausformed, Drawing**  
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- WIRES, Steel, Ausformed, Mechanical properties**  
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Infra-red radiometer improves wire and cable production. L. C. Whitney. *Mass Production*, 40 (Oct 64) p.53-6. il.
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Galvanizing wire by the Sendzimir process. *Wire Industry*, 31 (Sep 64) p.892. il.
- WIRES, Steel, Manufactures**  
After a bigger share of a growing market: Samuel Fox's new wire department. *Steel Times*, 188 (12 Jun 64) p.798-9. il.  
Alloy wire drawing: new plant for Samuel Fox at Sheephouse Wood. *Iron & Steel*, 37 (Jul 64) p.360-2. il.  
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Drawing special alloy wires. *Metal Industry*, 104 (11 Jun 64) p.796-7. il.  
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Stainless and alloy steel wire production [Samuel Fox & Co. Ltd.] *Engineer*, 217 (19 Jun 64) p.1093-4. il.  
Wire drawing works in a National Park [Samuel Fox] *Engineering*, 197 (19 Jun 64) p.847-8. il.  
Wire mill in a parkland setting [Samuel Fox & Co. Ltd.] *Wire Industry*, 31 (Jul 64) p.679-82. il.
- WIRES, Steel, Manufactures, Handling, Cranes, Overhead, Travelling**  
Crane considerations in building design [British Monorails] J. Dallas. *Machinery Lloyd (Overseas ed.)* 36 (18 Jul 64) p.32-3. il.

**WIRES, Steel, Mild, Ageing, Quench, Determination, Pendulums, Torsion**

Quench-ageing in low-carbon steel. D. Kyffin, A. Smith & W. G. Murray. *Metallurgist*, 3 (Jan 64) p.20-1. il. refs.

**WIRES, Steel, Reinforced aluminium alloys. See ALUMINIUM, Alloys, Reinforced, Wires, Steel****WIRES, Steel, Stainless, Elements, Filters, Hydraulic systems, Aircraft. See AIRCRAFT, Hydraulic systems, Filters, Elements, Wires, Steel, Stainless****WIRES, Stranding, Machines**

Development of the multi head stranding machine. S.

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New concept stranding machine. S. McGonigal. *Design & Components in Engng.* (23 Apr 64) p.28-31. il.

**WIRES, Tinning**

Tinning of wire. C. J. Thwaites. *Wire Industry*, 31 (May 64) p.479-83. il. refs.

**WIRES, Tungsten, Doped, Recrystallisation, Effect of temperature**

Effect of temperature and heating rate on the secondary recrystallization of doped tungsten wires. M. Mannerkoski. *J. of Inst. of Metals*, 92 (Jan 64) p.149-50. il. refs.

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Making reeds for wire weaving [M. H. Spencer, Coventry]

*Wire Industry*, 31 (Oct 64) p.1004-5. il.

**WIREWOUND RESISTORS. See RESISTORS, Wirewound****WISHBONES (Motor cars) Assembly**

Auto-assembly machines beat component variables [Hi-Ton Machine tools Ltd.] P. J. Varley. *Metalworking Production*, 108 (21 Oct 64) p.73-5. il.

Vauxnall automatic assembly: upper wishbones for the Vauxnall Victor assembled on Hi-Ton in-line transfer machines. *Automobile Engr.*, 54 (Oct 64) p.446-50. il.

**WITHAM**

See

ROADS, Witham

**WOKING**

See

FLATS, Woking

**WOKINGHAM**

See

TOWN HALLS, Wokingham

**WOLSELEY 6/110 CARS. See MOTOR CARS, Types,**

Wolseley 6/110

**WOLSELEY 6/110 Mk.2 CARS. See MOTOR CARS, Types,**

Wolseley 6/110 Mk.2

**WOLSELEY 1500 MOTOR CARS. See MOTOR CARS, Types,**

Wolseley 1500

**WOLSELEY HORNET CARS. See MOTOR CARS, Types,**

Wolseley Hornet

**WOLSELEY HORNET MK.2 MOTOR CARS. See MOTOR**

CARS, Types, Wolseley Hornet Mk.2

**WOMEN DRIVERS, Motor cars. See MOTOR CARS, Drivers,**

Women

**WOOD**

Related Headings:

ANTIARIS

BALSAMO

BARK

CEDAR, Western red

CINNAMON WOOD

COFFEE BERRY

FICUSALYPTS

GONÇALO ALVES

GUIBOUTIA EHIE

HARDWOODS

KOKKO

LOGS

MANSONIA

OGEA

PHDIEK

REDWOOD

**WOOD**

Related Headings—cont.

SHOREA MERANTI

SUCUPIRA

TEAK

WENGE

**WOOD—SUBHEADINGS—Synopsis**

*This synopsis shows, in italic, related subheadings which are separated in the alphabetical sequence following.*

Research

Problems

*Pests*

Properties

*Thermal conductivity*

*Chemistry*

*Coalification*

Technical activities

*Drying*

*Manufactures*

*Moulding*

*Cutting*

*Saws*

*Planing*

*Surfacers*

*Drilling*

*Mortising*

*Routing*

*Joining*

*Finishing*

*Sanding*

*Coating*

*Painting*

*Graining*

*Flameproofing*

*Preservation*

*Storage*

*Mechanical handling*

Kinds of wood

*Painted*

*Preservative treated*

*Reinforced*

Products and byproducts

*Chipboard*

*Waste*

Applications

*Building materials*

*Prefabricated building materials*

WOOD, Beams. See BEAMS, Wood

WOOD, Benches, Laboratories. See LABORATORIES, Benches, Timber

WOOD, Boards, Floors. See FLOORS, Boards, Wood

WOOD, Bodies, Commercial vehicles. See VEHICLES, Commercial, Bodies, Wood

WOOD, Boxes. See BOXES, Wood

WOOD, Bridges. See BRIDGES, Wood

**WOOD, Building materials**

Backroom of timber engineering. H. J. Andrews. *Woodworking Industry*, 21 (Feb 64) p.86-8. il.

Building surveyor's review of development. H. P. Stone. *Municipal Engng.*, 141 (10 Jan 64) p.65

Development of timber engineering. *Industrialised Building*, 1 (Jun 64) p.44-5. il.

- WOOD, Building materials, Effect of central heating**  
 Minimising the effects of central heating. W. H. Brown. Woodworking Industry, 21 (Aug 64) p.465+  
 More ways to reduce the effects of central heating. W. H. Brown. Woodworking Industry, 21 (Sep 64) p.535-6
- WOOD, Building materials, Finishing**  
 Wood finishing: architectural requirements. J. W. Collier. Woodworking Industry, 21 (Mar 64) p.159
- WOOD, Building materials, Houses.** See **HOUSES, Building materials, Wood**
- WOOD, Building materials, Preservation**  
 Pre-treatment for structural purposes. W. E. Bruce. Municipal Engng., 141 (10 Jan 64) p.59+
- WOOD, Building materials, Recreation centres.** See **RECREATION CENTRES, Building materials, Wood**
- WOOD, Buildings.** See **BUILDINGS, Wood**
- WOOD, Buildings, Zoological gardens.** See **ZOOLOGICAL GARDENS, Buildings, Wood**
- WOOD, Caravans.** See **CARAVANS, Wood**
- WOOD, Chipboard, Bodies, Motor vehicles.** See **MOTOR VEHICLES, Bodies, Wood chipboard**
- WOOD, Chipboard, Farm buildings.** See **FARM BUILDINGS, Wood chipboard**
- WOOD, Chipboard, Manufactures**  
 Novobord opens at Thetford. Insulation J., 7 (Nov/Dec 63) p.204-7. il.  
 Weyroc's fifth British chipboard plant. Engineering, 198 (18 Sep 64) p.377-8. il.  
 World's most modern chipboard plant. D. Hallier. Woodworking Industry, 21 (Sep 64) p.525-7. il.
- WOOD, Chipboard, Manufactures, Control systems**  
 Quality control in chipboard manufacture. Chemical Processing, 10 (Mar 64) p.48-9. il.  
 Quality control in wood chipboard production [Novobord] M. E. Critchley. Brit. Plastics, 37 (Apr 64) p.202-4. il.
- WOOD, Chipboard, Shipbuilding materials**  
 Fire-retarding chipboard for use in ships. D. R. Forster. Shipping World, 150 (20 Feb 64) p.439  
 Helping British shipbuilders. D. R. Forster. Woodworking Industry, 21 (Oct 64) p.606
- WOOD, Chips, Pine.** See **PINE, Wood chips**
- WOOD, Classrooms, Schools.** See **SCHOOLS, Classrooms, Wood**
- WOOD, Coalification, Artificial**  
 Role of the cellulosic and lignitic components of wood in artificial coalification. A. Davis & W. Spackman. Fuel: J. of Fuel Science, 43 (May 64) p.215-24. il. refs.
- WOOD, Coating**  
 Exterior coatings for wood. V. R. Gray. Wood, 29 (Jan 64) p.47-9
- WOOD, Corrosion agents, Aluminium.** See **ALUMINIUM, Corrosion, Wood**
- WOOD, Doors, Farm buildings.** See **FARM BUILDINGS, Doors, Wood**
- WOOD, Drilling, Multiple, Jigs**  
 Use of jigs can simplify repetitive boring. E. Stephenson. Woodworking Industry, 22 (Jun 64) p.340-1. il.
- WOOD, Drying, Kilns**  
 Is kilning up-to-date. W. H. Brown. Woodworking Industry, 21 (Jan 64) p.26+. il.  
 Kilning air dried timber. W. H. Brown. Woodworking Industry, 21 (Apr 64) p.221+  
 Timing kiln drying. W. H. Brown. Woodworking Industry, 22 (May 64) p.277+  
 Trade practice—and its problems. Woodworking Industry, 21 (Nov 64) p.671-2
- WOOD, Exteriors, Housing.** See **HOUSING, Exteriors, Wood**
- WOOD, Farm buildings.** See **FARM BUILDINGS, Timber**
- WOOD, Farm structures.** See **FARM STRUCTURES, Wood**
- WOOD, Fences.** See **FENCES, Wood**
- WOOD, Finishing, Colour matching, Instruments**  
 Instruments for colour matching of finishes. P. W. Sherwood. Wood, 29 (Feb 64) p.43-4. il.
- WOOD, Finishing, Lacquers**  
 Combination and compromise. J. W. Collier. Woodworking Industry, 22 (Jun 64) p.353
- WOOD, Finishing, Lacquers, Drying**  
 What is 'drying time'? J. W. Collier. Woodworking Industry, 21 (Oct 64) p.615
- WOOD, Finishing, Lacquers, Nitrocellulose, Pulling over solutions**  
 Pullover—and its problems. J. W. Collier. Woodworking Industry, 21 (Nov 64) p.680-1
- WOOD, Finishing, Pigments**  
 Pigmenting clear finishes. J. W. Collier. Woodworking Industry, 21 (Aug 64) p.479
- WOOD, Fishing vessels.** See **FISHING, Vessels, Wood**
- WOOD, Fittings, Halls, University buildings.** See **UNIVERSITY BUILDINGS, Halls, Fittings, Wood**
- WOOD, Flame proofing, N-alkenyl phosphoramidates**  
 Preparation of N-alkenyl and N-m styryl-phosphoramidates and their application as flame retardants for wood. P. C. Arni & E. Jones. J. of Applied Chemistry, 14 (Jun 64) p.221-8. refs.
- WOOD, Flame proofing, N-m styryl phosphoramidates**  
 Preparation of N-alkenyl and N-m styryl-phosphoramidates and their application as flame retardants for wood. P. C. Arni & E. Jones. J. of Applied Chemistry, 14 (Jun 64) p.221-8. refs.
- WOOD, Floors.** See **FLOORS, Timber**
- WOOD, Floors, Houses.** See **HOUSES, Floors, Timber**
- WOOD, Foot bridges.** See **BRIDGES, Foot, Wood**
- WOOD, Formwork, Concrete construction, Buildings.** See **BUILDINGS, Concrete, Construction, Formwork, Wood**
- WOOD, Frames, Houses.** See **HOUSES, Frames, Wood**
- WOOD, Frames, Roofs, Halls, Schools.** See **SCHOOLS, Halls, Roofs, Frames, Timber**
- WOOD, Frames, Windows.** See **WINDOWS, Frames, Wood**
- WOOD, Frames, Windows, Farm buildings.** See **FARM BUILDINGS, Windows, Frames, Wood**
- WOOD, Furniture.** See **FURNITURE, Wood**
- WOOD, Furniture, Study bedrooms.** See **STUDY BEDROOMS, Furniture, Wood**
- WOOD, Graining**  
 Modern graining: American red oak. R. Barnett. Painting & Decoration, 84 (Jun 64) p.49. il.  
 Modern graining: strawberry tree. R. Barnett. Painting & Decorating, 84 (Jul 64) p.29. il.
- WOOD, Graining, Polystyrene, Cabinets, Receivers, Television.** See **TELEVISION, Receivers, Cabinets, Polystyrene, Graining, Wood**
- WOOD, Halls.** See **HALLS, Wood**
- WOOD, Houses.** See **HOUSES, Wood**
- WOOD, Hulls, Motor boats.** See **BOATS, Motor, Hulls, Wood**
- WOOD, Hyperbolic parabolic shell roofs, Factories.** See **FACTORIES, Roofs, Shell, Hyperbolic paraboloid, Timber**
- WOOD, Industrial buildings.** See **INDUSTRIAL BUILDINGS, Wood**
- WOOD, Interior decoration, County offices.** See **COUNTY OFFICES, Interior decoration, Wood**
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**WORK STUDY**

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DRILLING  
DRILLS  
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FLAME CUTTING  
FLOW PEELING  
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FOUNDRY PRACTICE  
GAUGING  
GRINDING  
HAND TOOLS  
INDEXING, Fixtures  
MACHINE TOOLS  
MACHINING  
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PLANING  
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PRESS TOOLS  
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PUNCHING  
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ROUTING  
SLOTING  
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#### X-RAYS

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See ZINC, Crystals, Single, Dislocations, X-ray diffraction

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**X-RAYS, Fluorescence, Spectroscopy, Cement. See CEMENT, Spectroscopy, X-ray fluorescence****X-RAYS, Fluorescence, Spectroscopy, Chromium determination, Films, Passivation, Tinplate. See TINPLATE, Passivation, Films, Determination of chromium, X-ray fluorescence spectroscopy****X-RAYS, Fluorescence, Spectroscopy, Europium, Silicate glass constituents. See GLASS, Silicate, Constituents, Europium, X-ray fluorescence spectroscopy****X-RAYS, Fluorescence, Spectroscopy, Lubricating oils. See LUBRICATING OILS, Spectroscopy, X-ray fluorescence****X-RAYS, Fluorescence, Spectroscopy, Metals determination, Lubricating oils. See LUBRICATING OILS, Determination of metals, X-ray fluorescence spectroscopy****X-RAYS, Fluorescence, Spectroscopy, Non-dispersive**

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Related Headings:

ELECTRON PROBE MICROANALYSIS

**X-RAYS, Microanalysis, Radioactive materials. See RADIO-**

ACTIVE MATERIALS, Microanalysis, Electron probe

**X-RAYS, Microscopy, Coated uranium carbide, Fuels, Nuclear reactors. See NUCLEAR REACTORS, Fuels, Uranium carbide, Coated, Microscopy, X-ray****X-RAYS, Moiré fringe production. See MOIRE FRINGES, Production, X-rays****X-RAYS, Radiography, Aircraft structures. See AIRCRAFT, Structures, Radiography, X-rays****X-RAYS, Testing, Enclosed components, Rockets. See ROCKETS, Components, Enclosed, Testing, X-ray****X-Y PLOTTERS, Characteristics, Amplifiers. See AMPLIFIERS, Characteristics, X-Y plotters****X-Y PLOTTERS, Gate circuits, Nuclear magnetic resonance. See NUCLEAR MAGNETIC RESONANCE, Gate circuits, X-Y plotters****XANTHATES, Collectors, Flotation, Galena. See GALENA, Flotation, Collectors, Xanthates****XANTHENOL. See XANTHYDROL****XANTHONE, Polarography**

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ROCKETS, Liquid fuelled, Tracking, Lamps, Xenon

## XEROGRAPHY

Science and art of xerography, pt.1. A. A. Newman. Brit. J. of Photography, 111 (25 Sep 64) p.784-7. il. refs.

Science and art of xerography, pt.2. A. A. Newman. Brit. J. of Photography, 111 (2 Oct 64) p.804-8. il. refs.

Science and the art of xerography, pt.3. A. A. Newman. Brit. J. of Photography, 111 (9 Oct 64) p.828-9. il. refs.

## XEROGRAPHY, Equipment

Development of table-top xerography. Design & Components in Engng. (12 Nov 64) p.45-7. il.

XEROGRAPHY, Output units, Computers. See COMPUTERS, Output units, Xerography

XYLENES, Phthalic acid production. See PHTHALIC ACID, Production, Xylenes

## XYLENES, Production (Petrol) Solvent extraction

Recent advances in BTX extraction processes [use of sulpholane, N-methyl pyrrolidone and monomethyl formamide] P. W. Sherwood. Petroleum 27 (Feb 64) p.74-5

## XYLENES, Utilisation

Chemical markets for C<sub>8</sub>-C<sub>9</sub>-aromatics. P. W. Sherwood. Industrial Chemist, 40 (Jan 64) p.25-8. il.

2,6-XYLENOL, Reagents, Colorimetry, Nitrate determination, Water. See WATER, Determination of nitrates, Colorimetry, Reagents, 2,6-Xylenol

## YACHTS

40-knot sailboat [extract from book of the same title] B. Smith. Hovering Craft & Hydrofoil, 4 (Nov 64) p.32-7. il. Style & pace afloat [Scimitar] Hawker Siddeley Rev. (Nov 64) p.36-9. il.

## YACHTS, Basins

Brighton marina: a £10 million yachting harbour project. Shipbuilding & Shipping Record, 104 (8 Oct 64) p.486. il.

Brighton marina project will cost £10,000,000: combines yachting and marina facilities with a car ferry terminus. Surveyor, 124 (19 Sep 64) p.67-8. il.

Controlled tipping paves the way for Southport marina. Municipal J., 72 (7 Feb 64) p.409+. il.

Developing yacht harbours in Great Britain. Surveyor, 122 (21 Dec 63) p.1601-3. il.

Developing yacht harbours in Gt. Britain (extracts) Motor Boat, 100 (7 Feb 64) p.50-1

Good scheme, wrong site. Architects' J., 140 (23 Sep 64) p.660. il.

Marinas for Londoners. Motor Boat, 100 (15 May 64) p.44-7. il.

Proposed yacht marina, Stansgate Essex. Builder, 206 (20 Mar 64) p.601. il.

## YACHTS, Electrical equipment

Electric power for small craft. W. F. Walters. Ship & Boat Builder, 17 (Mar 64) p.77+. il.

## YACHTS, Laying up

Maintenance short cuts. J. S. Townsend. Motor Boat, 101 (18 Sep 64) p.41-3. il.

Maintenance short cuts. J. S. Townsend. Motor Boat, 101 (16 Oct 64) p.40-1. il.

## YACHTS, Motor

Boats in perspective: Odyssey class motor sailer. Motor Boat, 100 (12 Jun 64) p.49-52. il.

Compact well built motor-sailer. Motor Boat, 101 (4 Sep 64) p.28-9. il.

For offshore cruising. Motor Boat, 99 (13 Dec 63) p.22-3. il.

Novel ideas in motor sailer. Motor Boat, 101 (16 Oct 64) p.26-7. il.

## YACHTS, Motor—cont.

"Patra" a twin-screw motor yacht. Shipbuilding & Shipping Record, 103 (30 Jan 64) p.155. il.

"Persea"—a luxuriously appointed motor yacht. Shipbuilding & Shipping Record, 104 (10 Sep 64) p.349-51. il. t.s.m.y. "Aurora"—an unusually large aluminium yacht. Shipbuilding & Shipping Record, 104 (13 Aug 64) p.218-19. il.

Tried in Swanage Bay. Motor Boat, 100 (12 Jun 64) p.71-2. il.

Twin-screw motor yacht "Shannon Lister". Shipbuilding & Shipping Record, 103 (21 May 64) p.692. il.

Two new boats: that stateside look and the newcomer from Spain. Motor Boat, 100 (15 May 64) p.54-5. il.

## YACHTS, Motor, Building

Bright future for luxury cruiser production [Morgan Giles of Teignmouth] D. Hollier. Woodworking Industry, 21 (Aug 64) p.462-4. il.

## YACHTS, Motor, Diesel engines, Maintenance

Maintenance short cuts. J. S. Townsend. Motor Boat, 101 (2 Oct 64) p.44-6. il.

## YACHTS, Motor, Gearboxes

Transmitting the power. E. L. D. Morgan. Motor Boat, 100 (20 Mar 64) p.58-60. il.

Transmitting the power. E. L. D. Morgan. Motor Boat, 100 (3 Apr 64) p.76-7. il.

## YACHTS, Navigation, Tidal waters, Solent

Riddle of the tides. M. J. Rantzen. Motor Boat, 101 (30 Oct 64) p.14-16. il.

Solving the Solent streams. M. J. Rantzen. Motor Boat, 101 (27 Nov 64) p.46-8. il.

## YACHTS, Operation

Painless formalities. Motor Boat, 100 (12 Jun 64) p.59-60

## YACHTS, Performance, Open water

Pilotage. M. J. Rantzen. Motor Boat, 100 (6 Mar 64) p.89-91. il.

## YACHTS, Photography, Sea

Boat to boat photography. B. Kedge. Motor Boat, 101 (27 Nov 64) p.49-51. il.

## YACHTS, Sailing

Estimation of effect of sail performance on yacht close-hauled behaviour. P. R. Crewe. R. Instn. of Naval Architects Q. Trans., 106 (Jul 64) p.287-333. il. refs.

"Science" of sailing. D. Phillips-Birt. New Scientist, 23 (10 Sep 64) p.622-5. il.

## YACHTS, Steel

Their first in steel [James A. Silver Ltd.] Motor Boat, 100 (26 Jun 64) p.26-7. il.

YAGI AERIALS, Receivers, U.H.F. television. See TELEVISION, U.H.F., Receivers, Aerials, Yagi

## YALE UNIVERSITY, Kline Geology Laboratory

Kline Geology Laboratory. Architectural Design, 34 (Apr 64) p.174-5. il.

## YALE UNIVERSITY, Kline Science Centre

Kline Science Centre, Yale. Architectural Design, 34 (Apr 64) p.176-7. il.

## YALE UNIVERSITY, School of Art & Architecture

Art and Architecture Building, Yale, U.S.A. J. Fowler.

Architectural Design, 34 (Apr 64) p.160-1. il.

Art & Architecture Building, Yale University: criticism.

V. Scully. Architectural Rev., 135 (May 64) p.324-32. il.

Art & architecture faculty building, Yale. Architectural Design, 34 (Apr 64) p.178-80. il.

YAMAHA MOTOR CYCLES. See MOTOR CYCLES, Types, Yamaha

## YARD, Standards

United Kingdom standards of the yard in terms of the metre. P. H. Bigg & P. Anderton. Brit. J. of Applied Physics, 15 (Mar 64) p.291-300. il. refs.



**YARNS**

Yarn notes. J. Duffy. *Hosiery Trade J.*, 71 (Sep 64) p.108-11. il.

**YARNS**

Related Headings:

HANKS  
SLIVERS  
TOPS

**YARNS—SUBHEADINGS—Synopsis**

This synopsis shows, in *italic*, related subheadings which are separated in the alphabetical sequence following.

## Properties

Mechanical properties  
Stress-strain relationships  
Stiffness  
Hairiness  
Twist  
Count

## Technical activities

Processing  
Drawing  
Winding  
Warping  
Spinning  
Twisting  
Doubling  
Dyeing

Equipment  
Packages

## Kinds of yarns

Filament  
By property  
Elastic  
Texturea  
By material  
Cellulosic  
Cotton  
Linen  
Jute  
Woollen  
Worsted  
Man-made fibres

Cellulosic  
Cellulose acetate  
Rayon  
Polynosics  
Polyamides  
Nylon  
Polyester fibres  
Terylene  
Acrylic fibres  
Polyurethane  
Lycra  
Paper

**YARNS, Acrylic fibres, Textured, Relaxing, Steam**

Steam relaxing acrylics on the Andrew "auto-setter".

*Hosiery Times*, 37 (Jun 64) p.34+

Treatment of acrylic yarns: steam relaxing in autoserter.  
*Textile Weekly*, 64 (8 May 64) p.820+. il.

**YARNS, Carpets.** See CARPETS, Yarns

**YARNS, Cellulose acetate, Textured, Manufactures**

False-twist acetate enters the race. *Skinner's Record*, 38 (Mar 64) p.187-9. il.

**YARNS, Cellulosic, Dyeing, Package, Fluid flow**

Effect of liquor flow on the levelness of yarn packages dyed with vat dyestuffs. H. Borsten. *Textile Recorder*, 82 (Jul 64) p.56-9. il. refs.

Effect of liquor flow on the levelness of yarn packages dyed with vat dyestuffs, pt.2. H. Borsten. *Textile Recorder*, 82 (Aug 64) p.55+. il. refs.

**YARNS, Cotton**

Related Headings:

CANDLEWICK

**YARNS, Cotton, Dyeing, Beam, Machines**

Card-controlled beam dyeing plant [Stonebridge Cotton Manufacturing Co.] *Textile Weekly*, 64 (13 Mar 64) p.433-4. il.

Card controlled beam dyeing at Colne. Dyer, *Textile Printer, Bleacher & Finisher*, 131 (20 Mar 64) p.454-5. il.

**YARNS, Cotton, Elastic**

How cross-link resins put stretch into old king cotton.

J. J. Brown & G. F. Ruppenicker, Jun. *Hosiery Times*, 37 (Mar 64) p.52+. il.

**YARNS, Cotton, Manufactures, Boilers, Water tube, Oil-fired**

Three boilers replace eleven in cotton mill modernisation plan [J. & P. Coats] *Engng. & Boiler House Rev.*, 79 (May 64) p.164-7. il.

**YARNS, Cotton, Packages, Permeability**

Permeability of cross-wound cotton yarn packages. M. J. Denton. *J. of Textile Inst. Trans.*, 55 (Apr 64) p.228-42. il. refs.

**YARNS, Cotton, Photolysis, Inhibitors, Copper**

Effect of copper and iron on the photodegradation of cotton. R. I. C. Michie & S. M. Neale. *J. of Textile Inst. Trans.*, 55 (Feb 64) p.129-35. refs.

**YARNS, Cotton, Photolysis, Inhibitors, Iron**

Effect of copper and iron on the photodegradation of cotton. R. I. C. Michie & S. M. Neale. *J. of Textile Inst. Trans.*, 55 (Feb 64) p.129-35. refs.

**YARNS, Cotton, Processing, Machines**

Blowroom machinery for the cotton industry: features of the Hergeth cleaning & opening line. *Textile Weekly*, 63 (20 Dec 63) p.1184-6. il.

Preparatory and spinning machinery of the cotton type. *Textile Recorder*, 82 (Nov 64) p.93-6. il.

**YARNS, Cotton, Sizing, Softeners, Mowrah fat, Hydrogenated**

Softeners in the sizing of longcloth warps. M. G. Kulkarni, C. Nanjundayya & R. Chamanlal. *Textile Recorder*, 82 (Sep 64) p.73-6

**YARNS, Cotton, Spinning**

Modern trends in continental spinning. *Textile Weekly*, 63 (27 Dec 63) p.1238-40. il.

Spinning: today & tomorrow. G. Dakin. *Textile Weekly*, 64 (10 Apr 64) p.595+

Studies in the spinning quality of cotton. S. M. Nawaz & A. J. Khan. *Textile Inst. & Industry*, 1 (Dec 63) p.12

**YARNS, Cotton, Spinning, Condenser**

Condenser spinning on the continental system. G. Heyn. *Textile Weekly*, 64 (3 Jan 64) p.17+. il.

**YARNS, Cotton, Spinning, Count**

Control of yarn count in cotton spinning. S. Somasundar. *Textile Recorder*, 82 (Oct 64) p.62+. il. refs.

**YARNS, Cotton, Spinning, Drafting**

Roberts F.C. drafting system: its application to the Hobourn-Roberts arrow ring frame. P. Caldwell. *Textile Weekly*, 64 (31 Jan 64) p.172+. il.

**YARNS, Cotton, Spinning, Drafting, Weighting arms**

Top weighting arm aids synthetic fibre drafting [Sussen Universal] *Textile Weekly*, 64 (16 Oct 64) p.641+. il.

**YARNS, Cotton, Spinning, Irregularity, Research**

Cotton yarn irregularity: some of the work done on spinning at the Shirley Institute. G. Dakin. *Textile Weekly*, 64 (23 Oct 64) p.681-2

Cotton yarn irregularity: research into causes & effects. G. Dakin. *Textile Weekly*, 64 (30 Oct 64) p.741+

**YARNS, Cotton, Spinning, Machines**

Reconstruction of Hargreaves' Spinning Jenny. S. L. Cole. Engng. Designer (May 64) p.2-6. il. refs.

**YARNS, Cotton, Winding, Bobbins, Flyer**

Additional roving on flyer bobbins by close winding [Maier F-type flyer] Textile Weekly, 64 (4 Sep 64) p.373. il.

**YARNS, Count, Effect of lap weight variation**

Effects of scutcher lap weight variation on yarn quality.

T. V. Ratnam, V. Ramakrishnan, K. Ranganathan & G. Srikanthiah. Textile Recorder, 82 (May 64) p.60+. refs.

Effects of scutcher lap weight variation on yarn quality, pt.2. T. V. Ratnam, V. Ramakrishnan, K. Ranganathan & G. Srikanthiah. Textile Recorder, 82 (Jun 64) p.55+. il.

**YARNS, Doubling**

Trends in doubling & twisting. O. Glaessner. Textile Weekly, 64 (27 Nov 64) p.905+. il.

**YARNS, Drawing, Frames**

Development & possibilities of the modern drawframe [Globe & Mercury drawframes] Textile Weekly, 64 (17 Jan 64) p.88+. il.

High-speed drawing of cotton and synthetic fibres.

[Andreani vertical drawframe]. Textile Weekly, 64 (2) (25 Sep 64) p.493+. il.

**YARNS, Drawing, Frames, Coilers**

Coiling into large diameter cans. P. S. Jain. Textile Recorder, 81 (Jan 64) p.44+. il.

**YARNS, Dyeing, Beam**

Card controlled beam dyeing at Colne. Dyer, Textile Printer, Bleacher & Finisher, 131 (20 Mar 64) p.454-5. il.

**YARNS, Dyeing, Colour matching, Instruments**

Colour-matching by computer. D. W. Harrison. Hosiery Times, 37 (Jun 64) p.73+. il.

Colour-matching by computer. E.S.C. perfect automatic thread dyeing. P. G. Noble. Hosiery Times, 37 (Feb 64) p.49-50. il.

Colour ranges by computer: building a "library" of dyeing recipes [Elliot 803] Textile Weekly, 64 (28 Feb 64) p.342-3. il.

Computer colours—by Coats. Hosiery Times, 37 (Mar 64) p.37+. il.

Computer control for colours [Coats Research Laboratory] Hosiery Trade J., 71 (Mar 64) p.116-18. il.

Computer controls colours of threads. Instrument & Control Engng. (May 64) p.15-17. il.

Instrumental aids to the dyer in colour matching. V. W. Harrison. Textile Manufacturer, 90 (Mar 64) p.115-17.

Match prediction in thread manufacture. P. G. Noble. Dyer, Textile Printer, Bleacher & Finisher, 131 (7 Feb 64) p.217+. il.

Modern instrumental aids for colour matching textile products. P. W. Sherwood. Textile Manufacturer, 90 (Apr 64) p.161+

Versatile equipment will analyse complex multi-coloured patterns. Textile Manufacturer, 90 (Jan 64) p.28+. il.

**YARNS, Dyeing, Machines**

McCleery & L'Amie plant. Hosiery Times, 37 (Sep 64) p.43+. il.

**YARNS, Dyeing, Package**

Package dyeing for knitters and weavers. [Robinson Bros. (Blackburn) Ltd.]. Man-Made Textiles, 41 (Oct 64) p.63+. il.

**YARNS, Dyeing, Space, Machines**

New machine builder starts to diversify. [Laing system] Man-Made Textiles, 41 (Sep 64) p.85-6. il.

**YARNS, Elastic**

Natural rubber thread—a firm foundation (extracts) D. H. Boulter. Rubber Developments, 16 no.4 (1963) p.131-3. il.

YARNS, Elastic, Hosiery. See HOSIERY, Yarns, Elastic

**YARNS, Elastic, Manufactures**

British Glosplan production by year end. Man-Made Textiles, 41 (Jan 64) p.22-3. il.

Rubber and spandex threads: a new Anglo-American project. Hosiery Times, 37 (Jan 64) p.37-8. il.

Stretch thread plant opens in Devon: rubber thread first, then spandex, from Globe's new plant. Skinner's Record, 38 (Jan 64) p.27-8. il.

They've got it well covered [E. Wykes (Leicester) Ltd] Man-Made Textiles, 41 (May 64) p.34+. il.

**YARNS, Elastic, Testing**

Improved Schwartz board for testing rubber threads. F. H. Murden. Textile Inst. & Industry, 2 (Feb 64) p.32-3. il.

**YARNS, Filament, Twist, Correlation with optical rotation**

Optical properties of twisted fibres. H. J. Woods. J. of Textile Inst., Trans., 55 (Apr 64) p.243-50. il. refs.

**YARNS, Fleece tufted man-made fibres, Fabrics. See FABRICS, Man-made fibres, Tufted, Fleece, Yarns****YARNS, Hairiness, Counters**

Instrument for the study of yarn hairiness. J. Lappage & W. J. Onions. J. of Textile Inst. Trans., 55 (Aug 64) p.381-95. il.

**YARNS, Jute, Mechanical properties, Correlation with fibre properties**

Comparison of jute fibre and yarn properties. J. N. Mother. J. of Textile Inst., Trans., 55 (Aug 64) p.401-11. refs.

**YARNS, Knitting. See KNITTING, Yarns****YARNS, Linen, Processing**

Reducing flax conversion losses by higher operating efficiencies. S. A. G. Caldwell. Textile Manufacturer, 90 (Mar 64) p.99-102. il.

**YARNS, Lycra—Orlon**

Du Pont push core-spuns: 18 European spinners to make "Orlon"/"Lycra" yarns. Hosiery Times, 37 (Sep 64) p.29+. il.

**YARNS, Man-made fibres**

Filament yarns & staple fibres for British users. Man-Made Textiles, 41 (Feb 64) p.28-34

Guide to fibres, yarns and prices. Skinner's Record, 38 (Jul 64) p.613+

**YARNS, Man-made fibres, Dyed, Light-fastness**

Comparative study of natural and xenotest exposure conditions for measuring fading and degradation. L. F. C. Friele. J. of Soc. of Dyers & Colourists, 79 (Dec 63) p.623-31. il. refs.

**YARNS, Man-made fibres, Filament, Extrusion**

Plastics production lines. Machinery Lloyd (Overseas ed.) 36 (29 Aug 64) p.36-7. il.

Plastics production lines. Machinery Lloyd (European ed.) 36 (Oct 64) p.58-9. il.

**YARNS, Man-made fibres, Filament, Manufactures, Machines**

Machinery for processing filament man-made fibre yarns. M. S. Burnip. Textile Recorder, 82 (Nov 64) p.100-2. il.

**YARNS, Man-made fibres, Filament, Twisting, Filament migration**

Filament migration in single yarns. G. Riding. J. of Textile Inst. Trans., 55 (Jan 64) p.9-17. il. refs.

**YARNS, Man-made fibres, Manufactures**

Luxury French yarns for the fashion trade. Hosiery Trade J., 71 (Nov 64) p.115-16. il.

**YARNS, Man-made fibres, Spinning**

Art and science of fibre-making. M. M. Zwick. Chemistry & Industry (6 Jun 64) p.953-60. il. refs.

**YARNS, Man-made fibres, Spinning, Drafting, Weighting arms**

Top weighting arm aids synthetic fibre drafting [Sussen Universal] Textile Weekly, 64 (16 Oct 64) p.641+. il.

**YARNS, Man-made fibres, Textured**

More false-twist units for Danish texturiser. [Spinlon]. Skinner's Record, 38 (Nov 64) p.1021-3. il.

Single-process false-twist texturizing [Uhde KRZ 250] Textile Weekly, 64 (31 Jul 64) p.176-7. il.

Textured yarns of Britain. Man-Made Textiles, 41 (Jul 64) p.111-12. il.

- YARNS, Man-made fibres, Textured, Fabrics, Knitwear.** See KNITWEAR, Fabrics, Man-made fibres (Textured yarn)
- YARNS, Metallic**  
Related Headings:  
LUREX LUMINEX
- YARNS, Nylon, Carpets.** See CARPETS, Yarns, Nylon
- YARNS, Nylon, Processing, Heating**  
Temperature measurement in yarn processes. C. R. Jones. *Nylon Outlook* (Summer 64) p.20-4. il.
- YARNS, Nylon, Spinning, Dyeing**  
Spun coloured 70-den. nylon. *Hosiery Times*, 37 (Oct 64) p.83+
- YARNS, Nylon, Stock control, Data processing**  
Automatic recording of nylon production [British Nylon Spinners Ltd.] *Engineer*, 218 (23 Oct 64) p.658-9. il. ref.
- YARNS, Nylon, Textured, Dyed, Winding**  
Automated hank-to-cone installation in production. *Textile Manufacturer*, 90 (May 64) p.182-3. il.  
Automation in yarn processing [Qualitex Yarns Ltd.] *Hosiery Times*, 37 (May 64) p.74-6. il.  
Hank-to-cone installation at Qualitex. *Textile Weekly*, 64 (17 Apr 64) p.669-70. il.  
Mechanical handling system in bulked yarn winding [Qualitex Silks Ltd.] *Textile Recorder*, 82 (Jun 64) p.60-1. il.
- YARNS, Nylon, Textured, Knitted fabrics.** See FABRICS, Nylon, Knitted, Textured yarn
- YARNS, Nylon 6**  
Delfin makes swift progress in Britain. *Skinner's Record*, 38 (Mar 64) p.211-12. il.
- YARNS, Nylon 66, Annealed, X-ray diffraction**  
Effect of tension and annealing on the X-ray diffraction pattern of drawn 6.6 nylon. D. R. Beresford & H. Bevan. *Polymer*, 5 (May 64) p.247-56. il. refs.
- YARNS, Nylon 66, Tensioned, X-ray diffraction**  
Effect of tension and annealing on the X-ray diffraction pattern of drawn 6.6 nylon. D. R. Beresford & H. Bevan. *Polymer*, 5 (May 64) p.247-56. il. refs.
- YARNS, Packages, Sizes**  
Practical implications of optimum package size on spinning systems. W. Slater. *Textile Inst. & Industry*, 2 (Sep 64) p.205-8
- YARNS, Paper**  
European number one in kraft yarn wares [Somic Ltd.]. *Skinner's Record*, 38 (Jul 64) p.578-9. il.  
Paper yarns at less than 1s. per lb. (summary) J. W. Illingworth. *Dyer, Textile Printer, Bleacher & Finisher*, 131 (17 Apr 64) p.608
- YARNS, Polyester fibres, Sizing**  
Sizing hydrophobic fibres. R. W. Moncrieff. *Textile Recorder*, 81 (Mar 64) p.58-60. il. refs.
- YARNS, Polynosics**  
Polynosics: how it all started. *Skinner's Record*, 38 (Aug 64) p.673+. il.
- YARNS, Polynosics, Filament**  
First filament polynosic: Courtaulds launch a new yarn for industrial uses. *Man-Made Textiles*, 41 (Jul 64) p.28-9. il.
- YARNS, Polyurethane, Elastic**  
Structure & properties of elastomeric fibres. R. Meredith & I. A. Fyfe. *Textile Inst. & Industry*, 2 (Jul 64) p.154-7. ref.
- YARNS, Polyurethane, Elastic, Dyeing**  
Dyeing elastomeric fibres. J. Ehlert. *Man-Made Textiles*, 41 (Mar 64) p.53+. il. refs.
- YARNS, Polyurethane, Elastic, Dyeing, Package**  
Package dyeing elastomeric yarns. J. Ehlert. *Man-Made Textiles*, 41 (Sep 64) p.70+. il.
- YARNS, Polyurethane, Knitting.** See KNITTING; Yarns, Polyurethane
- YARNS, Processing, Machines**  
Twisting, winding, sizing and yarn preparation machines. J. B. Smith. *Textile Recorder*, 82 (Nov 64) p.103+. il.
- YARNS, Rayon**  
Latest rayons go well in industry: everything from polynosics to flock versions have some applications. *Skinner's Record*, 38 (Jun 64) p.483-4. il.
- YARNS, Rayon, Spinning, Boxes, Drives, Frequency changers**  
Spinning-box drives: frequency-converters and switches. A. G. Arend. *Man-Made Textiles*, 41 (Jun 64) p.61+. il.
- YARNS, Rayon, Viscose, Spinning, Bradford system, Fibre migration**  
Fibre migration of viscose rayon staple-fibre yarns processed on the Bradford worsted system. P. P. Townsend & J. Dewhurst. *J. of Textile Inst., Trans.*, 55 (Oct 64) p.485-502. refs.
- YARNS, Sizing, Machines**  
Engineering problems of high speed sizing machines. A. V. Douglas. *Textile Manufacturer*, 90 (Apr 64) p.140-3. il.  
Engineering problems of high speed sizing machines (contd.) A. V. Douglas. *Textile Manufacturer*, 90 (May 64) p.178-81. il.
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Technical aspects of manpower utilization in the spinning mill. J. Lustig. *Textile Recorder*, 82 (Dec 64) p.46-9. il.  
Unconventional methods of spinning. P. R. Lord. *Textile Recorder*, 82 (Aug 64) p.44+. il. refs.
- YARNS, Spinning, Condenser**  
Condenser spinning on the continental system [Spinnbau RFS frame] G. Heyn. *Textile Weekly*, 64 (10 Jan 64) p.52-4. il.  
Condenser spinning: optimum package size. *Textile Manufacturer*, 90 (Jun 64) p.225+. il.
- YARNS, Spinning, Drafting, Aprons, Rubber, Synthetic, Maintenance**  
Replacing bottom aprons on drafting systems [Armstrong Cork Co. Ltd.] *Textile Weekly*, 64 (12 Jun 64) p.1034
- YARNS, Spinning, Drafting, Machines**  
British machinist to make American drafting systems [Amertrol & Unitrol] *Textile Weekly*, 64 (21 Aug 64) p.291-2. il.
- YARNS, Spinning, Machines**  
Automation in the spinning industry. F. A. Greenwood. *Textile Weekly*, 64 (6 Nov 64) p.774+  
McCleery & L'Amie plant. *Hosiery Times*, 37 (Sep 64) p.43+. il.
- YARNS, Spinning, Machines, Electric motors, Speeds**  
Assessing power demands for higher spinning-box speeds. A. G. Arend. *Man-Made Textiles*, 41 (Feb 64) p.45-6. il.
- YARNS, Spinning, Machines, Positive feed**  
Yarn tensions in positive feed systems. P. J. Crabbe. *J. of Textile Inst., Trans.*, 55 (Oct 64) p.503-11
- YARNS, Spinning, Mechanical handling**  
Materials handling in the mill. G. M. Aspinall. *Textile Weekly*, 64(2) (25 Sep 64) p.498+. il.
- YARNS, Spinning, Ring frames, Cop marking**  
Prevention of mixed yarns: novel cop marking device for ring frames [Caps: system] *Textile Weekly*, 64 (17 Jan 64) p.95-6. il.
- YARNS, Spinning, Ring frames, Doffers**  
Automatic and semi-automatic doffing units [Jacobi Jacotex] *Textile Recorder*, 81 (Apr 64) p.84+. il.  
Co-ordinated doffing & cone winding [Do-Co-Matic] A. J. Van der Veen. *Textile Weekly*, 64 (24 Apr 64) p.719+
- YARNS, Spinning, Ring frames, End breakages**  
Spindle allocation in ring spinning and its effect on roving waste. T. A. Subramanian. *J. of Textile Inst., Trans.*, 55 (Nov 64) p.558-65
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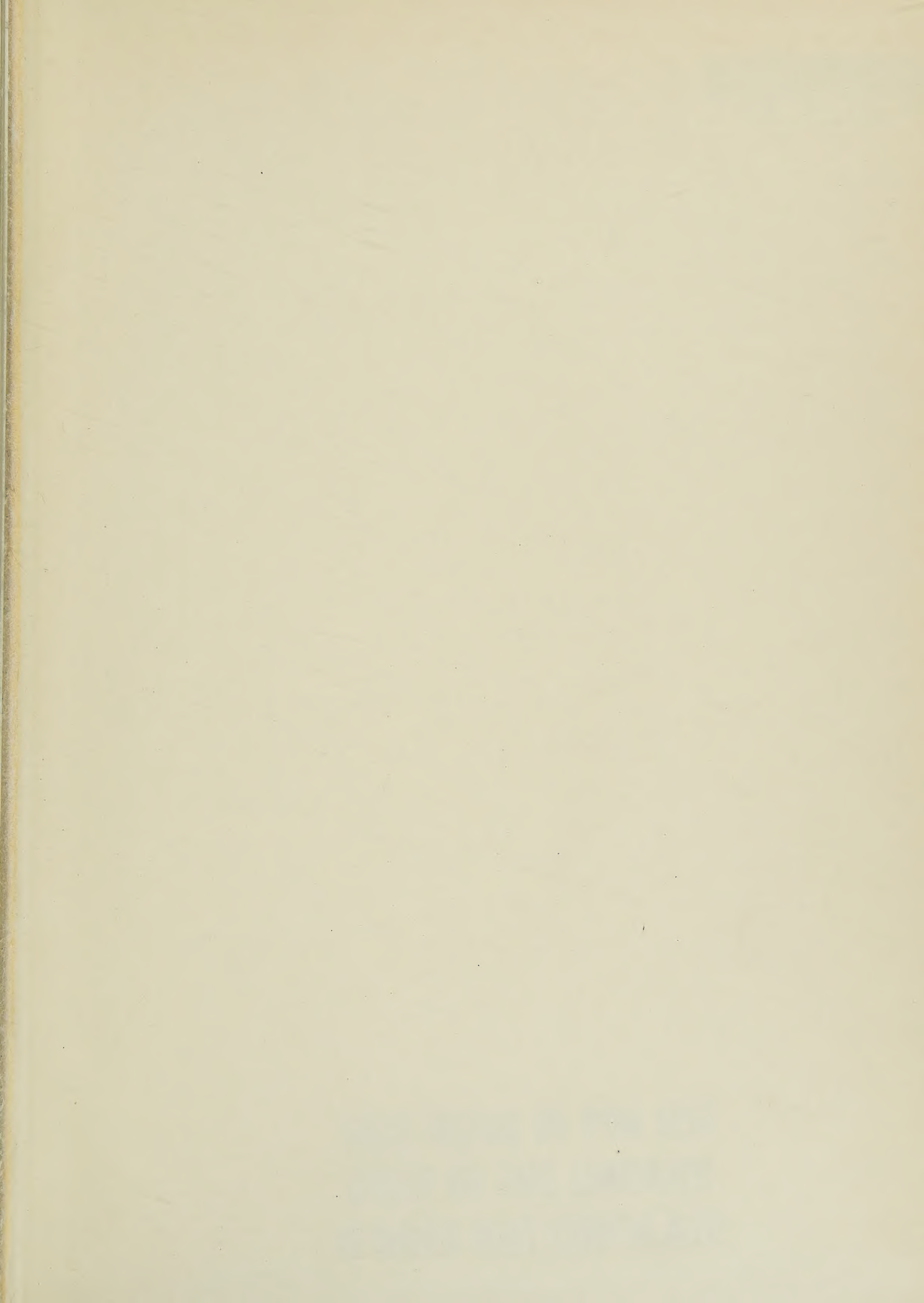
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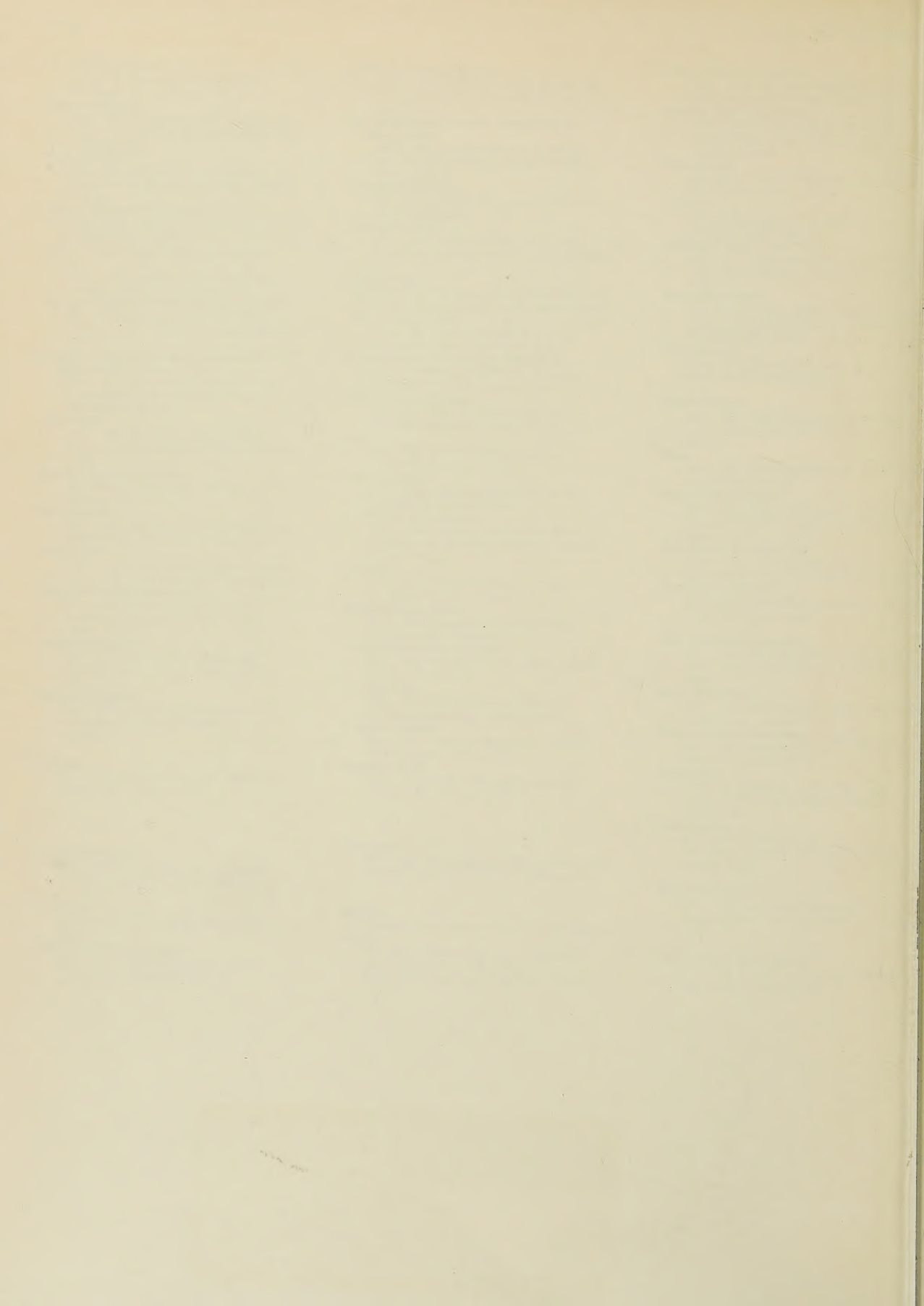
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